

NATURAL RESOURCES MANAGEMENT AND ENVIRONMENT DEPARTMENT

SAFA

Sustainability Assessment of Food and Agriculture systems

Draft Guidelines

(Version 2.0)



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Acknowledgements

SAFA is a project of the Natural Resources Management and Environment Department. The Guidelines are developed by Nadia El-Hage Scialabba, in cooperation with a number of experts, including Sasha Courville, Jan Grenz, Elisabeth Guttentstein, Elisabeth Henderson, Mathilde Iweins, Julia Jawtusich, Madeleine Kaufmann, Cristina Larrea, Sally Lee, Jonathan Loh, Noémi Nemes, Gaia Pisani, Aimee Russillo, Christian Schader, Michael Sligh, Susanne Stalder, John Stansfield and Christian Thalmann.

Special thanks go to the several hundred individuals who provided their knowledge and insights on the occasion of the SAFA experts consultations held in November 2009 and April 2011, electronic public fora held in early 2011 and 2012, thirty SAFA pilots studies, participants of the March 2013 practitioners and partners' workshop, and numerous stakeholders interviewed and met in conferences where SAFA iterations were presented. Last but not least, the contributions of nearly one hundred colleagues across the legal, agriculture, forestry, fisheries, social and economic Departments of FAO is acknowledged.

Preface

More than two decades have passed since the principle of sustainable development received nearly universal agreement at the 1992 Earth Summit. Recent years have seen some progress in the realization of a socially, economically and environmentally sustainable development. Many stakeholders in the food and agriculture sector have contributed to this progress, by improving agricultural productivity, protecting human and natural resources and conceiving and implementing frameworks, standards and indicators for assessing and improving sustainability across the sector and along the value chain.

Hundreds of sustainability frameworks have been developed in the last decade by universities, civil society and national and international institutions, ranging from environmental and social standards to corporate social responsibility and codes of good practices that apply to operational units or specific supply chains, with or without labelling. This expansion of sustainability tools and various claims place a burden on producers and traders and frustrate consumers in the market place. In addition, the implementation of an integrated approach to analyzing all sustainability dimensions as a coherent whole, and integrating them into business or development strategies, remains a major challenge.

Global trade and the governance of inter-state externalities on public goods (e.g. climate, biodiversity, food safety, financial stability), compounded by the proliferation of sustainability schemes, call for a multi-party cooperation that must be supported by “common rules” in order to reduce fragmentation, prevent conflicts, mitigate uncertainty and build capacities for effective sustainability. More accurate data and sound guiding principles to establish a common basis for assessing sustainability is needed. Tackling these challenges requires, among other things, a common language for sustainability, as well as a holistic approach to assessment and implementation that considers the complexity and relationships of all dimensions of sustainability. While there is now a wide awareness of the sustainability concept, there is also wide interpretation of the definitions and components of sustainability based on different disciplines and political beliefs and values. There is need to measure what matters; the dilemma is measure *what* matters to *whom* and *how*?

SAFA is a holistic global framework for the assessment of sustainability along food and agriculture value chains. SAFA establishes an international reference for assessing trade-offs and synergies between all dimensions of sustainability. It has been prepared so that enterprises and actors involved with the production, processing, distribution and marketing of goods have a clear understanding of the constituent components of sustainability and how strength, weakness and progress could be tackled. By providing a transparent and aggregated framework for assessing sustainability, SAFA seeks to harmonize sustainability approaches within the food value chain, with the long-term objective of sustainable transformation of food systems.

These Guidelines are the result of five years of participatory development, together with practitioners from civil society and private sector. SAFA builds on, and acknowledges, existing sustainability tools, with the goal of integrating and relating current systems. The target audience of a SAFA assessment is small, medium and large-scale companies, organizations and other stakeholders that participate in crop, livestock, forestry and fishery value chains. However, as a framework and harmonized global assessment approach, SAFA is also relevant to governments' strategies, policy and planning.

The guiding vision of SAFA is that food and agriculture systems worldwide are characterized by four dimensions of sustainability: good governance, environmental integrity, economic resilience and social well-being. For each of these four dimensions of sustainability, SAFA outlines essential elements of sustainability based on international reference documents and conventions. The 21 themes and 56 sub-themes were further defined through expert consultations. Core performance indicators for each sub-theme facilitate measuring progress towards sustainability. SAFA assessment involves adaptation to geographic, sector-specific and individual conditions of the assessed entity and the comprehensive use of existing documentation, standards and tools.

The SAFA Guidelines are produced in the same spirit of codes of practice, guidelines and other recommended measures to assist in achieving sustainable and fair practices in food and agriculture production and trade. The Guidelines are the result of an iterative process, built on the cross-comparisons of codes of practice, corporate reporting, standards, indicators and other technical protocols currently used by private sector, governments, not-for-profits and multi-stakeholder organizations that reference or implement sustainability tools. A list of the reference documents used for the structure and methodology of the SAFA Guidelines are found in Appendix D.

The SAFA Guidelines consist of three sections: Section 1 describes the purpose, linkages, principles and scope of SAFA; Section 2 outlines the procedure of SAFA implementation; Section 3 contains the SAFA protocol for sustainability themes and sub-themes. Core indicators are found in Appendix A and will be subject to periodic reviews.

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The SAFA Guidelines were piloted through 30 specific case studies conducted in both developed and developing countries in 2012-13 across all continents. The case studies covered a diverse range of food value chain enterprises to test implementation under different contexts. Based on the outcomes of the case studies, the SAFA Guidelines were finalized. FAO will be releasing SAFA Tools later in 2013 and 2014, with a view to assist implementation of the SAFA Guidelines.

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Abbreviations

4Cs	Common Code for the Coffee Community
B2B	Business to Business
B2C	Business to Consumer
CBD	Convention on Biological Diversity
CGD	Center for Global Development
CMP	Conservation Measures Partnership
COSA	Committee on Sustainability Assessment
CSR	Corporate Social Responsibility
EFQM	European Foundation for Quality Management
FAO	Food and Agriculture Organization of the United Nations
FLO	Fairtrade Labelling Organization
FSC	Forest Stewardship Council
GAP	Good Agricultural Practices
GEA	Greening the Economy with Agriculture
GHG	Greenhouse Gas Emissions
GLOBALGAP	Global Partnership for Good Agricultural Practices
GRI	Global Reporting Initiative
GSCP	Global Social Compliance Programme
HACCP	Hazard Analysis Critical Control Points
IDEA	Indicateurs de Durabilité des Exploitations Agricoles
IISD	International Institute for Sustainable Development
ILO	International Labor Organization
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
ISEAL Alliance	International Social and Environmental Accreditation and Labelling Alliance
ISO	International Organization for Standardization
LCA	Life Cycle Analysis
M&E	Monitoring and Evaluation
MSC	Marine Stewardship Council
OECD	Organization for Economic Cooperation and Development
PCR	Product category rules
RA	Rainforest Alliance
RISE	Response-Inducing Sustainability Evaluation
ROL	Rule of Law
RSB	Roundtable on Sustainable Biofuels
RSPO	Roundtable on Sustainable Palm Oil
RTRS	Roundtable on Responsible Soy
SAFA	Sustainability Assessment of Food and Agriculture systems
SAI	Social Accountability International
SAI platform	Sustainable Agriculture Initiative Platform
SAN	Sustainable Agriculture Network
SFL	Sustainable Food Lab

SME	Small and Medium Enterprises
SSI	State of Sustainability Initiative
SSTI	Sustainable Standards Transparency Initiative
TSC	The Sustainability Consortium
UNCTAD	United Nations Conference on Trade and Development
UNCED	United Nations Conference on Environment and Development
UNCSD	United Nations Conference on Sustainable Development
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNGC	United Nations Global Compact
UNITC	United Nations International Trade Centre
WBCSD	World Business Council for Sustainable Development
WCED	World Commission on Environment and Development
WEF	World Economic Forum
WHO	World Health Organization
WTO	World Trade Organization

Part 1: SAFA Framework

1.1 Purpose of SAFA

SAFA Vision

The Sustainability Assessment of Food and Agriculture systems (SAFA) Guidelines were developed as a working proposal for assessing the impact of food and agriculture operations. The guiding vision of SAFA is that food and agriculture systems worldwide are characterized by all four dimensions of sustainability: good governance, environmental integrity, economic resilience and social well-being.

Sustainable development has been defined by FAO as “the management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agriculture, forestry and fisheries sectors) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable”. (FAO Council, 1989).

SAFA offers a holistic framework that encompasses all aspects of sustainable cropping, livestock husbandry, fisheries and forestry. It builds mainly on existing sustainability schemes, creating opportunities for enterprises to use existing data and combining efforts with other tools and sustainability initiatives. SAFA allows a fair playing field for all by presenting a framework that is adaptable to all contexts and sizes of operations, and focusing on performance. The SAFA encourages continuous improvement and builds capacity for sustainability by offering an easy-to-use standardized system, which does not require external experts. This vision can be realized through different pathways, depending on local circumstances.

Based on aggregate global trends and outlooks for the future, sustainable development efforts are not making enough positive difference. More accurate data and sound guiding principles to establish a common basis for assessing sustainability is needed. Tackling these challenges requires, among other things, a common language for sustainability, as well as a holistic approach to assessment and implementation that considers the complexity and relationships of all dimensions of sustainability. This is the inspiration for SAFA.

By providing a transparent and aggregated framework for assessing sustainability, SAFA seeks to harmonize sustainability approaches within the food value chain, with the long-term objective of sustainable transformation of food systems. Using SAFA, enterprises and actors involved with the production, processing, distribution and marketing of food and agricultural goods have a clear understanding of the constituent components of sustainability and how strength, weakness and progress could be assessed.

What is SAFA about?

SAFA is a holistic global reference framework for the assessment of sustainability along agriculture value chains. SAFA was developed as an international reference document, a benchmark that defines the elements of sustainability and framework for assessing trade-offs and synergies between all dimensions of sustainability. There are several levels of SAFA, which are nested to enhance coherence at all levels (see Figure 1).

The SAFA Framework begins with the high level, overarching dimensions of sustainability: good governance, environmental integrity, economic resilience and social well-being. It is recognized that these dimensions are broad and encompass many aspects. These are translated into a universally agreed definition of sustainability, through themes and sub-themes for each of the sustainability pillars. These are measurable and verifiable through a set of core indicators applicable to food and agriculture supply chains. SAFA Guidelines provide the guidance for the application (calculation) of these indicators.

There are different users with different purposes who can enter at different levels of the SAFA Framework.

Figure 1: SAFA Framework



These are refined in a set of 21 core sustainability issues or universal “themes”. These can be implemented at any level, national, supply chain or operational unit and thus, provide a common understanding of what “sustainability” means in a practical context. These themes are thus considered

universal. At the universal, or **Theme**, level, policy-makers and national governments can work towards alignment and harmonization of a holistic scope of sustainability without defining the specific pathways. The SAFA framework and Themes allow the design and promotion of an integrated approach.

Sub-themes: each of the 21 sustainability themes is detailed into sub-themes, or individual issues within SAFA themes. This level, composed of 56 sub-themes, is relevant for supply chain actors doing a contextualization analysis which identifies risk or hot spot areas, as well as gaps in existing sustainability efforts. Other sustainability metric initiatives, standards and benchmarking schemes can identify issues and gaps not covered by their systems and tools for convergence and alignment at the sub-theme level.

Indicators: SAFA has defined Core Indicators within each sub-theme which identifies the measurable criteria for sustainable performance for the sub-theme. Core indicators are applicable at the macro level – meaning to all enterprise sizes and types, and in all contexts. Core indicators serve the purpose of providing standardized metrics to guide future assessments on sustainability. The core indicators' set is needed for a general level of reporting, as SAFA users do not necessarily have the knowledge to develop indicators themselves, without the risk of lowering the bar of the assessment. Core Indicators provide ratings for the highest performance (green) and unacceptable practices (red). Customized indicators are developed by the assessor for determining performance between green and red, depending on context. This is detailed in Section 2.

Who are the Guidelines aimed at?

SAFA can be used at multiple levels for multiple purposes and by different actors using a harmonized taxonomy under one framework ensuring consistency, applicability and transparency. Regardless of size, geography or role, all stakeholders have a clear and common language for assessing sustainability. SAFA serves as an effective means for:

Food and agriculture enterprises (individual or associations):

- self-assessment for evaluating sustainability at the operation level and identifying hot-spots for performance' improvement;
- gap analysis with existing sustainability schemes for thematic coverage' improvement;
- managing or benchmarking suppliers to improve sustainable procurement.

NGOs and sustainability standards and tools community:

- monitoring outcomes of impacts of projects;
- sharing of, and global learning on, best practices and thresholds;
- gap analysis with existing checklists on all aspects of sustainability.

Governments, investors and policy-makers:

- informing the establishment of Sustainable Development Goals;

- implementation of regional planning, local procurement, investment or the development of legislation;
- providing a global guidance on sustainable requisites for global supply chains to governments.

The objectives of SAFA Guidelines

The SAFA Guidelines are intended to provide an accessible operational resource to put the SAFA framework into practice at all levels for different purposes. The SAFA Guidelines provide a holistic interpretation of the major themes of sustainability (Framework), alignment with existing tools and initiatives (Sub-themes) and a template for agriculture and food sustainability assessment (Sub-themes and core indicators). Key performance (core) indicators for each sub-theme are proposed in order to facilitate measuring progress towards sustainability in a harmonized reporting format.

Acknowledging that there are many definitions of sustainable agriculture, depending on values, power relationships, time and space considered, SAFA offers a common framework for measuring performance according to core sustainability themes. SAFA provides an international reference tool for assessing the sustainability performance of food and agriculture enterprises. The purpose of a SAFA is to support the implementation of effective sustainability management and communication in the food and agriculture sector, worldwide. Through voluntary assessments, the goal is to holistically assess an enterprise performance along the four dimensions of sustainability. Using harmonized approaches contributes to making sustainable food chains more transparent, measurable and verifiable.

The Guidelines do not replace existing systems but put them into the perspective of an overarching common sustainability language for the food and agriculture sector. SAFA builds on existing sustainability tools, with the goal of integrating and relating current systems through the common framework. An underlying principle of SAFA is to avoid duplication and not to add complexity to a market already full of regulations and standards serving different purposes. SAFA serves this principle by providing a common understanding of the elements of sustainability and partnering with other initiatives for shared resources, such as methodologies, information and indicators (see the Linkages section below).

Use of SAFA results

With a SAFA, the performance of a company, branch of a company or production site is assessed concerning economic, environmental, social and governance sustainability. A SAFA is not a rating of product-specific sustainability, nor does it cover the use and end-of-life phases of products (e.g. at the consumer level). Being science-based and generic in nature, SAFA can be implemented at any level, national, supply chain or operational unit.

SAFA results can be used for internal management, as well as learning and communication purposes. For credibility, it is essential that the SAFA procedures and results have a high degree of transparen-

cy. The completion of a SAFA assessment does not allow the entity to use the logo of SAFA or FAO in any way that implies endorsement or certification, as no one is verifying the claim.

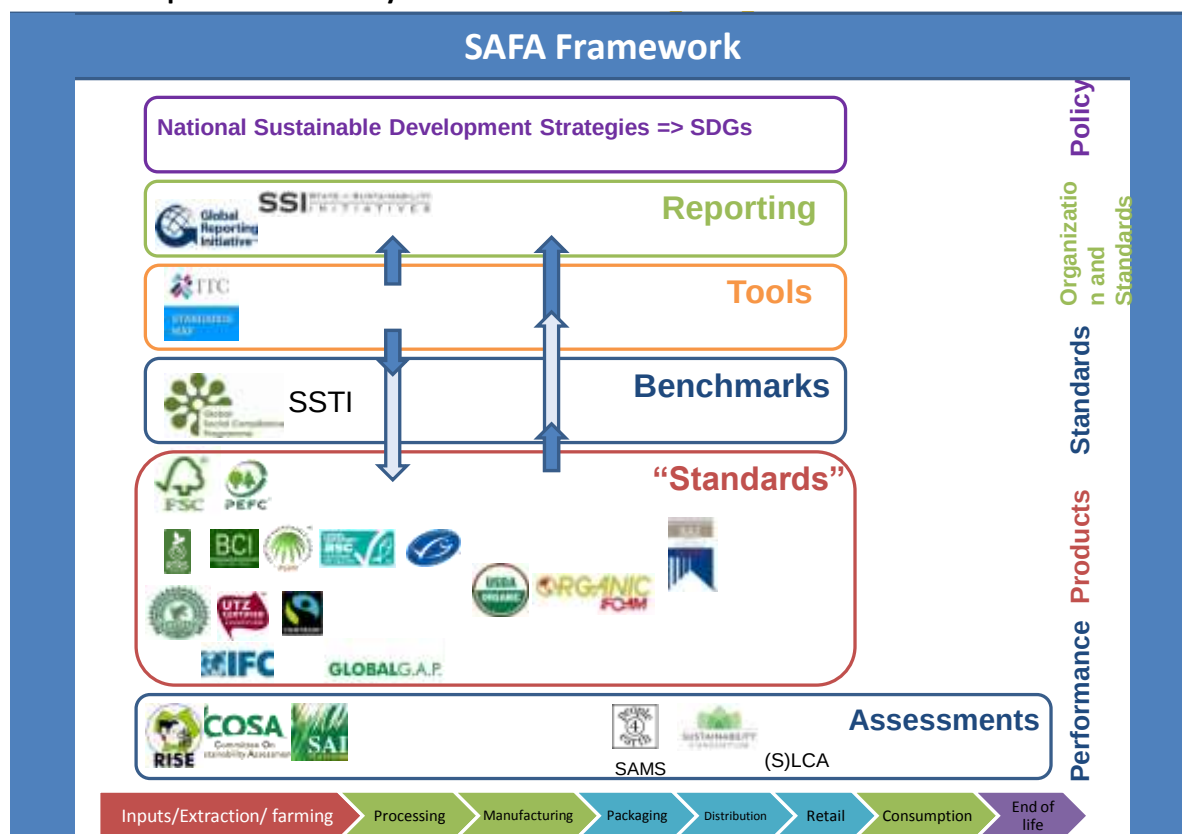
SAFA is not intended for Business-to-Consumer communication, as public assurance requires that certain characteristics or attributes of the product (or its production method), as laid down in specifications, be observed. SAFA does not assess products or processes – but enterprises. However, reference can be made to “consistency with the SAFA procedures and principles” provided that the assessment is made fully transparent in all its choices and customization (e.g. with regards to boundaries, data sources, indicator selection, rating).

1.2 The SAFA framework: linkages with other sustainability tools

Many tools, metrics and standards exist, covering different components of sustainability, and developed for different purposes and different users. The organizations and tools have different scope, methodologies, approaches, scope and scoring.

Figure 2 provides an overview of the landscape of different sustainability initiatives. Further details on the different tools for different purposes and scopes are found with Appendix B. Many of these tools are distinguished by different end use and users, with different coverage based on the different purposes and scope. For example:

- **reporting guidelines** for sustainability and CSR reporting by organizations;
- **benchmarking frameworks** for benchmarking other standards and codes;
- **standards** that distinguish products based on production and processing processes, and chiefly for Business-to-Consumer purposes;
- **assessment methodologies** at farm level or supply chains, or product-based LCA.

Figure 2: Landscape of sustainability initiatives

The goal of a SAFA assessment is improved accuracy of analysis of sustainability for all users. The use of existing rules, norms and standards expedite assessment for users, while avoiding duplication by integrating existing data. Benchmarking sustainability tools, while not useful for equivalency, is useful in mapping best practices, thresholds and sector-specific indicators. SAFA catalyzes improvements for sustainability, in a neutral and participatory mode, through FAO's leadership role in agriculture. SAFA recognizes that there is equivalence in different approaches and collaboration is driven by the recognition that problems and solutions have to be shared. There is a strong interest in aligning with a global reference framework, and collaborating to build trust in global supply chains with coordinated efforts to build convergence.

There is some merging and overlap of tools purposes found in Table 1. This list is not exhaustive, but outlines some of the main distinctions of what is commonly referred to as "sustainability assessments" and the potential interaction with SAFA.

As an umbrella framework, SAFA acts as a convener, or harmonizing agent of all sustainability tools to coordinate efforts to build convergence. Collaboration is driven by the recognition that problems and solutions have to be shared. There is a strong interest in aligning with a global reference framework and collaborating to build trust in global supply chains. SAFA recognizes that there is equivalence in different approaches to measuring sustainability. SAFA also recognizes existing sustainability schemes (e.g. environmental and social certification) and efforts (e.g. life-cycle assessment tools) as key resources for conducting a SAFA. The use of existing rules, norms and standards expedite assessment for users, while avoiding duplication by integrating existing data. This is discussed in Section 2, Step 3.

Table 1: Overview of different tool purposes and SAFA

Tools	Description	Main Scope	Main Use	Examples	SAFA Interaction
National sustainable development strategies	Build-upon and harmonize the various economic, social and environmental policies and plans that are operating in the country	National level	Government	Varies by country, and called for by Agenda 21, World Summit for Sustainable Development and the Commission on Sustainable Development	- Harmonized and comprehensive sustainability framework and themes - Harmonized sustainability terms and definitions
Reporting frameworks	Comprehensive guidelines for harmonized reporting on sustainability and organization performance	Organizations' sustainability performance	B2B	Global Reporting Initiative (GRI) IISD State of Sustainability Initiative (SSI)	- Harmonized framework of themes and sub-themes including gap analysis - Harmonized sustainability terms and definitions
Directories (meta-level)	Online databases of standards and codes	Standards, codes and frameworks	SMEs, buyers, Government	Ecolabel Index Standards Map (UN ITC)	- Harmonized sustainability terms and definitions - Internal benchmarking
Benchmarks and ratings	Equivalency and comparison assessments across standards and codes	Standards, codes and frameworks	B2B	GSCP ISEAL/GIZ/ITC Sustainable Standards Transparency Initiative (SSTI)	- Harmonized sustainability terms and definitions - Internal benchmarking
Voluntary Sustainable Standards (VSS)	Any non-obligatory set of requirements explicitly designed to promote the objectives of sustainable development, relating to environmental, social, ethical and food safety issues in the production and processing phases. Often third party-assessed through certification.	Production, some processing	B2C on and off product, some B2B.	Organic FairTrade Forest Stewardship Council	- Harmonized sustainability terms and definitions - Gap analysis of missing sustainability themes and subthemes - Performance indicators resource - Source of data for SAFA assessments

Tools	Description	Main Scope	Main Use	Examples	SAFA Interaction
Assessments: Life Cycle Tools	Technique to assess impacts associated with all the stages of a product's life	Product, from inputs, production, processing, manufacture, distribution, retail, consumption and disposal or recycling)	B2B	EcolInvent GABI Social-LCA (UNEP-SETAC) The Sustainability Consortium	- Harmonized sustainability terms and definitions
Self - assessments and data sharing platforms		Production	Reporting and data sharing	People 4 Earth SAI Soil and More Sustainability Flower Keystone Field to Market	- Harmonized framework of themes and sub-themes including gap analysis - Harmonized sustainability terms and definitions
Assessments and impact tools	Globally harmonized and scientifically rigorous methodology	Production		RISE COSA	- Harmonized framework of themes and sub-themes including gap analysis - Harmonized sustainability terms and definitions

B2B: Business to Business, including for government procurement decisions.

B2C: Business to Consumer communications.

1.3 Background and rationale

Sustainable development progress and challenges

The number of undernourished people was estimated by FAO to be 925 million in 2010. This figure has increased by 75 million people since 1990-92 (FAO, 2010a). Rockström *et al.* (2009) estimate that humanity has transgressed three of the environmental planetary boundaries within which we can operate safely, namely for climate change, biodiversity loss and changes to the global nitrogen cycle.

As agricultural land and forests occupy more than 60% of terrestrial surface, and fishery activities can be found on virtually any water body, agriculture, forestry and fisheries are major contributors to the ecological footprint of humanity. Thirty one percent (31%) of global greenhouse gas emissions have been attributed to agriculture and forestry (IPCC, 2007). Agriculture alone accounts for 70% of global freshwater withdrawals (FAO, 2011). On the other hand, besides being activities necessary for everybody's life and wellbeing, agriculture (including forestry and fisheries) provide livelihoods for 40 percent of today's global population, including many of the world's poor.

One approach to tackle the risk of the human economy's overstraining the capacities of Earth's ecosystems is the concept of a "Green Economy"¹ that respects planetary boundaries and adopts eco-efficiency as a guiding principle. The translation of the green economy concept for the food and agriculture sector is reflected through the Greening the Economy with Agriculture (GEA) concept that refers to "ensuring the right to adequate food, as well as food and nutrition security – in terms of food availability, access, stability and utilization – and contributing to the quality of rural livelihoods, while efficiently managing natural resources and improving resilience and equity throughout the food supply chain" (FAO, 2012a). The challenge of delivering sustainability lies in an effective integration of the environmental, economic and social dimensions of development. This can be only achieved through good governance.

Need for a common language

Measure what matters has become the mantra. But, measure WHAT matters to WHOM and HOW? While there is a wide awareness of the sustainability concept, there is also wide interpretation of the definitions and components of sustainability based on different disciplines and political beliefs and values.

Recent years have seen the development of frameworks, initiatives, standards and indicators for defining better management practices, assessing and improving the environmental and social impacts of human activities. More than one hundred countries have established national strategies for sustainable development, as well as sets of sustainability targets and indicators (UN, 2007). Thousands of companies have adopted concepts such as corporate social responsibility, creating shared value, responsible supply chain management and the triple bottom line. These concepts are put into practice through internal management, Business-to-Business and Business-to-Consumers' communica-

¹ An economy "that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities" (UNEP, 2011).

tion. Systems for independent, third-party verification, certification and accreditation have been put in place, as well as participatory guarantee systems based on stakeholders' assessments and peer reviews.

Of the many verification systems, tools, databases and other approaches for measuring, communicating and improving sustainability, essentially related to environmental impact or social impact, few cover the whole value chain and all dimensions of sustainability at the same time (Appendix B). In the development and application of sustainability systems and frameworks, small and medium size enterprises and stakeholders from developing and emerging countries are less represented than large companies and stakeholders from industrialised countries, in spite of many systems' building on transparent, participative mechanisms.

Despite the valuable efforts for making sustainability assessments in the food and agriculture sector accurate and easy to manage, no internationally accepted benchmark unambiguously defines what sustainable food production entails. There also is no widely accepted definition of the minimum requirements that would allow a company to qualify as "sustainable". SAFA proposes guidelines for assessment of sustainability performance along defined reference points (themes, sub-themes and core indicators).

1.4 SAFA principles

The SAFA Guidelines are based on certain core methodological principles including Bellagio Stamp (IISD, 2009; Pinter *et al.*, 2011). Additionally, SAFA draws upon the ISO norms for Life Cycle Assessment (ISO, 2009), the ISEAL Code of Good Practice (version 1.0; ISEAL Alliance, 2010), the ISEAL Credibility Principles (ISEAL Credibility Principles v0 3 - 11 June 2013) the Reference Tools of the GSCP (2010) and the GRI Sustainability Reporting Guidelines (version 3.1 and 4; GRI, 2011. 2013). Table 2 summarizes the SAFA principles.

Bellagio Stamp

Sustainability Assessment and Measurement Principles emphasize openness (accessibility and transparency), key indicators and standardized measurement methods, communication (meets needs of stakeholders, simple, plain language), broad participation, the assessment process for learning, sufficient institutional capacity and the need for a coherent framework and goals.

www.iisd.org/pdf/2009/brochure_bellagiostamp.pdf

Table 2: SAFA methodological and implementation principles

Methodological principles	Characteristics
Holistic	Undertaking a SAFA considers all four dimensions of sustainability: good governance, environmental integrity, economic resilience and social well-being and includes all aspects within the sphere and influence of the entity.
Relevance	SAFA goals are aligned with globally agreed principles and international reference documents, including Agenda 21 framework and goals.
Rigor	All SAFA goals should be in line with the current state of scientific knowledge on the economic, environmental, social and governance impacts of human activities. SAFAs are implemented to deliver quality outcomes and an accurate picture of the sustainability.
Efficiency	In order to leave a maximum of resources for improvement measures, the cost of doing a SAFA is minimized by making the best use of existing data from other sustainability, environmental and social management and auditing systems. Companies that participate in systems with sustainability claims can use the SAFA Guidelines to identify areas not yet covered by their sustainability management.
Performance-orientation	SAFA emphasis is on common outcome-oriented objectives enabling different approaches and uses. Undertaking a SAFA serves to assess the sustainable performance of an agricultural or food system entity. Commitments and management plans alone do not suffice to qualify an entity as sustainable.
Transparency	The disclosure of system boundaries, indicators' chosen, data sources and stakeholder relations is an important aspect of the SAFA Performance Report.
Adaptability	The Guidelines are generic in nature in order to be applicable worldwide and across the whole diversity of situations that exist in the agriculture and food sector. This principle <i>supports Accessibility</i> through the adaptation to all contexts and sizes of agriculture, fishery and forestry operations by adapting the generic set of themes and sub-themes' indicators to different socio-economic and environmental circumstances, type of entity and data availability.
Continuous improvement	SAFA is not intended as a minimum performance benchmark, but a tool to assess performance and identify areas for improvement. In addition, the SAFA Guidelines will be adjusted over time to continually raise the bar, as knowledge and technology permits.
Implementation principles	Characteristics
Build on existing tools	SAFA recognizes that there is equivalence in different approaches and collaboration is driven by the recognition that problems and solutions have to be shared. No SAFA goal, objective or indicator should contradict rules and principles that emanate from national law and relevant international agreements. The conduction of a SAFA must comply with all applicable legal provisions, in particular concerning privacy protection.
Take place in an open and learning system	The SAFA Guidelines are developed and hosted by FAO and are freely available to any interested party. They are the result of a continuing, open development process, contributions to which are welcome from all who have a stake in the sustainable development of food and agriculture systems. SAFA participation must always be voluntary. Implementing SAFA is in itself a learning pathway to create change and ultimately, deliver sustainability.
Accessibility	Fair playing field by tailoring requirements to remove barriers to implementation. SAFA is conceived for self-evaluation without the need for expert or third party assistance.

1.5 Scope of a SAFA assessment

Being science-based and generic in nature, SAFA can be adapted to different contexts and scopes. It is important to look at these different scopes in terms of SAFA coverage: supply chain scope, temporal and sustainability dimensions. Section 2 provides guidance on defining the different scopes outlined below.

Supply chain scope- setting the boundaries

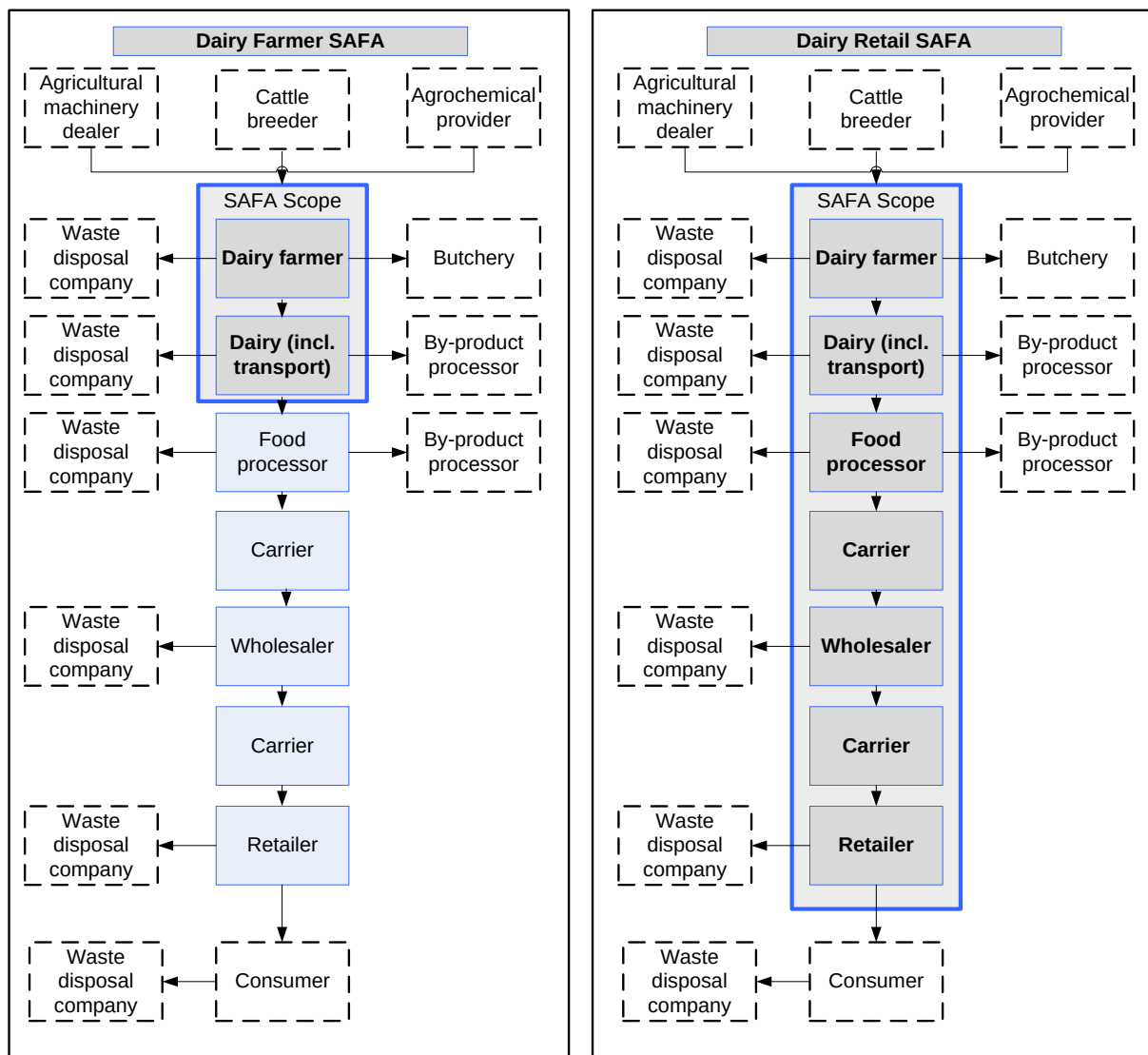
The supply chain starts with the production of a primary commodity, ends with the consumption of the final product and it includes all of the economic activities undertaken between these phases, such as: processing, delivery, wholesaling and retailing. SAFA is applicable to all entities in supply chains, from the inputs suppliers, through the site of primary production (agriculture, fisheries, forestry), to that of final sales to the consumer (see Figure 3).

As this can be quite extensive in global supply chains, the intended scope of a SAFA assessment includes all processes: (i) that are part of production or distribution, (ii) that generate **significant impacts** on sustainability in the surrounding environment and community and (iii) over which the assessed entity has **control or significant influence** regarding financial and operating policies and practices.

Ownership is not required for an entity to have control or significant influence over a piece of land or a facility. A SAFA can be also limited to a single production site or step of the supply chain with clear documented justification. The spatial coverage of SAFA extends to production facilities and their surroundings, insofar as the assessed entities control or have influence over the activities in these areas. Consideration of only specific areas or crops is not recommended.

In situations where a given enterprise is assessing supply from several farms that are organized as a cooperative or producers group, it is recommended that the SAFA can be either carried-out for each farm individually or for the group as a whole. For large groups, coverage of all group members will not be feasible. Generally, a representative sample of the group's member is a recognized solution to this challenge. Standard practice in group certification, based on ISO 62 criteria, is the square root approach. For group certification, this means to use the square root of the number of members. However, it is also recommended to do a risk assessment of the group members to ensure critical issues are not overlooked.

The entity conducting the assessment needs to determine their realm of influence accordingly (see Section 2, Step 1) by clearly defining the scope and setting boundaries of the assessment.

Figure 3: Examples of different SAFA scope

Two examples of SAFA scope in dairy supply chains. Grey rectangles with bold writing symbolise actors whose operations are covered by a SAFA done by a dairy (left) and a retail company (right), respectively. Dashed rectangles represent actors outside the general scope of SAFA.

Temporal scope- defining the time frame

SAFA is intended to cover the entity's activities for one year, which becomes the baseline for future assessments and identifying areas for improvement. This is particularly important for establishing thresholds for the ratings, especially in the environmental dimension. For some indicators, multi-year trends should be assessed or sustainability impacts be allocated to a longer period – usually in these instances, a period of five years is suggested. Assessing impacts on ecological processes cannot be punctual, as responses extend to periods well beyond the 1 or 5 years proposed for certain indicators. Time frames beyond the annual assessment cycle are specified in specific indicators based on expert consultation and scientific knowledge where applicable.

Thematic scope - defining the sustainability context

For each of these four dimensions of sustainability, SAFA outlines essential elements of sustainability through 21 high level themes. These are applicable at any level of development, for instance national level or commodity specific. The themes are further divided into 56 sub-themes. SAFA sub-themes are tailored to food and agriculture supply chains and thus, are not well suitable for policy development. Core indicators for each sub-theme are proposed in order to facilitate measuring progress towards sustainability. The SAFA proposed indicators focus on performance rather than management systems; however different types of indicators (i.e. target-based and practice-based indicators) are proposed with different weighting to ensure accessibility of SAFA where performance is difficult to measure.

Details on the four sustainability dimensions: themes, sub-themes and core indicators are provided in Sections 3 and Appendix A. Table 3 gives an overview of the themes and sub-themes.

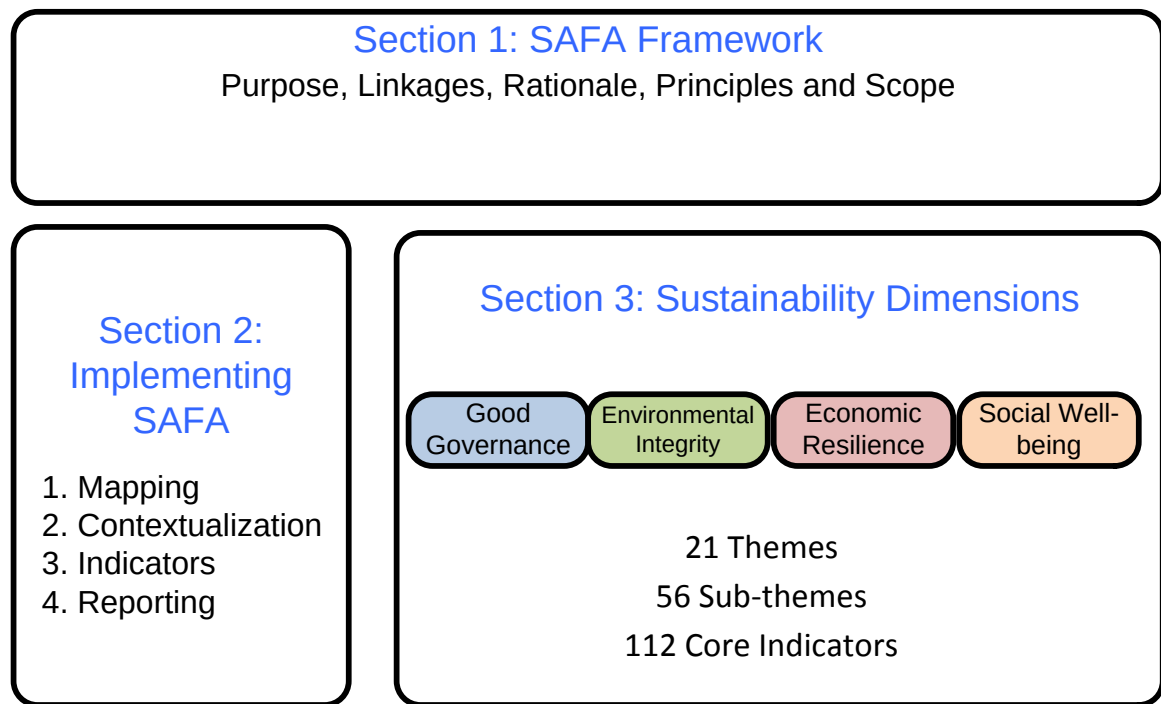
Table 3: SAFA Sustainability Dimensions, Themes and Sub-themes

Dimension G: GOOD GOVERNANCE	
Themes	Sub-Themes
G1 Corporate Ethics	Mission Statement; Due Diligence
G2 Accountability	Holistic Audits; Responsibility, Transparency
G3 Participation	Stakeholder Dialogue; Grievance Procedures; Conflict Resolution
G4 Rule of Law	Legitimacy; Remedy, Restoration and Prevention; Civic Responsibility; Resource Appropriation
G5 Holistic Management	Sustainability Management Plan; Full-cost Accounting
Dimension E: ENVIRONMENTAL INTEGRITY	
E1 Atmosphere	Greenhouse Gases; Air Quality
E2 Water	Water Withdrawal; Water Quality
E3 Land	Soil Quality; Land Degradation
E4 Biodiversity	Ecosystem Diversity; Species Diversity; Genetic Diversity
E5 Materials and Energy	Material Use, Energy Use, Waste Reduction and Disposal
E6 Animal Welfare	Health and Freedom from Stress
Dimension C: ECONOMIC RESILIENCE	
C1 Investment	Internal Investment; Community Investment; Long-ranging Investment, Profitability
C2 Vulnerability	Stability of Supply; Stability of Market; Liquidity; Risk management; Stability of Production
C3 Product Quality and Information	Food Safety; Food Quality; Product Information
C4 Local Economy	Value Creation; Local Procurement
Dimension S: SOCIAL WELL-BEING	
S1 Decent Livelihood	Right to Quality of Life; Capacity Building; Rights of Fair Access to Land and Means of Production
S2 Fair Trading Practices	Responsible Buyers
S3 Labour Rights	Employment Relations; Forced Labour; Child Labour; Employees' Freedom of Association and Right to Bargaining
S4 Equity	Non-discrimination; Gender Equality; Support to Vulnerable People
S5 Human Health and Safety	Workplace Safety and Health Provisions for Employees; Public Health
S6 Cultural Development	Indigenous Knowledge; Food Sovereignty

The Guide: How to Use it

The SAFA Guidelines consist of three sections (Figure 4). Section 1 provides the basic information on the purpose, linkages, background and use of the SAFA framework in terms of different users and purposes. Section 2 outlines the step by step approach for SAFA implementation including guidance on setting scope, boundaries, contextualization and reporting. Section 3 contains the SAFA protocol for sustainability themes, sub-themes and core indicators. Annex A provides guidance on core indicators’ relevance, measurement, rating, limitation and sources of information.

Figure 4: SAFA Guidelines structure



For first time users, regardless of purpose, it is recommended to read the entire Guidelines to understand the foundation and rationale of SAFA. This will aid in identifying the roles, purpose and scope of SAFA and maximize the benefits of adopting the framework.

Sections 2 and 3 will be most relevant for those responsible for implementing a SAFA assessment.

National governments, other sustainability initiatives and assessment initiatives may adopt or align at different levels as discussed earlier. Ideally, the sustainability themes serve as the overall framework with sub-themes and core indicators used for specific purposes and tools by different users.

Table 4: Components of SAFA Framework

Components of SAFA framework	Examples
Themes	Right to Decent Livelihood
Themes identify the major issue areas that must be addressed in assessing sustainability. In SAFA, Themes are defined using Theme Goals , which briefly elaborate on the scope and sustainable performance for the issues the theme encompasses.	Theme Goal: The enterprise provides assets, capabilities and activities that increase the livelihood security of all personnel and the local community in which it operates.
Sub-themes	Right to Quality of Life
Sub-themes are individual issues within SAFA themes. The sub-themes are further defined by Sub-theme Objectives , which are brief descriptions of sustainable performance for that issue.	Sub-theme Objective: All primary producers, small holders and employees enjoy a livelihood that provides a culturally appropriate and nutritionally adequate diet and allows time for family, rest and culture.
Core Indicators	Right to Quality of Life
SAFA has defined core indicators within each sub-theme which identify the measurable criteria for sustainable performance for the sub-theme. Core indicators are applicable at the macro level – meaning to all enterprise sizes and types, and in all contexts. Core indicators serve the purpose of providing standardized metrics to guide future assessments on sustainability. However, core indicators only contain the frame for the rating scale. Within the guidelines, core indicators have a rating definition of the top level of sustainability performance (green score) and examples of the unacceptable levels of performance (red score), but they do not contain full rating scales (as this is only possible at the contextualized level) and are not a sufficient indicator set from which to complete an assessment by themselves.	This qualitative indicator measures whether primary producers/employees (i) receive living wages from a limited number of hours a week from paid labour without compulsory overtime, speak the language of their choice and practice the religion or rituals that they prefer; (ii) enjoy a culturally appropriate diet; and (iii) have time to spend with family and neighbours. (Additional guidance on what is included in this indicator, how to measure it, and resources for developing contextualized indicator ratings are provided in the Annex of the SAFA guidelines.)

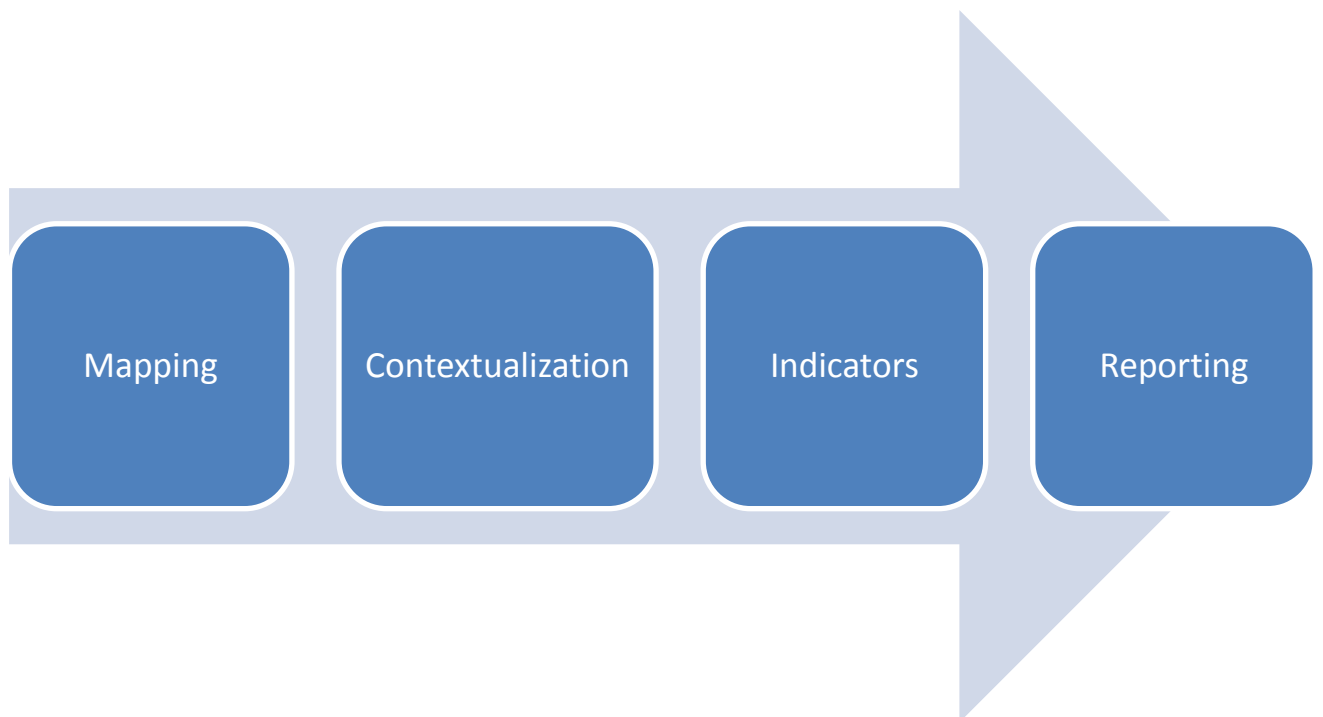


Tools for SAFA users



Resources needed

Part 2: Implementation of SAFA



SAFA Overview

This section details the implementation of SAFA. It is recommended that the user read through the entire Section 2 for an overview of the entire process. This will facilitate the identification of the resources needed and define responsibilities in the assessment team.

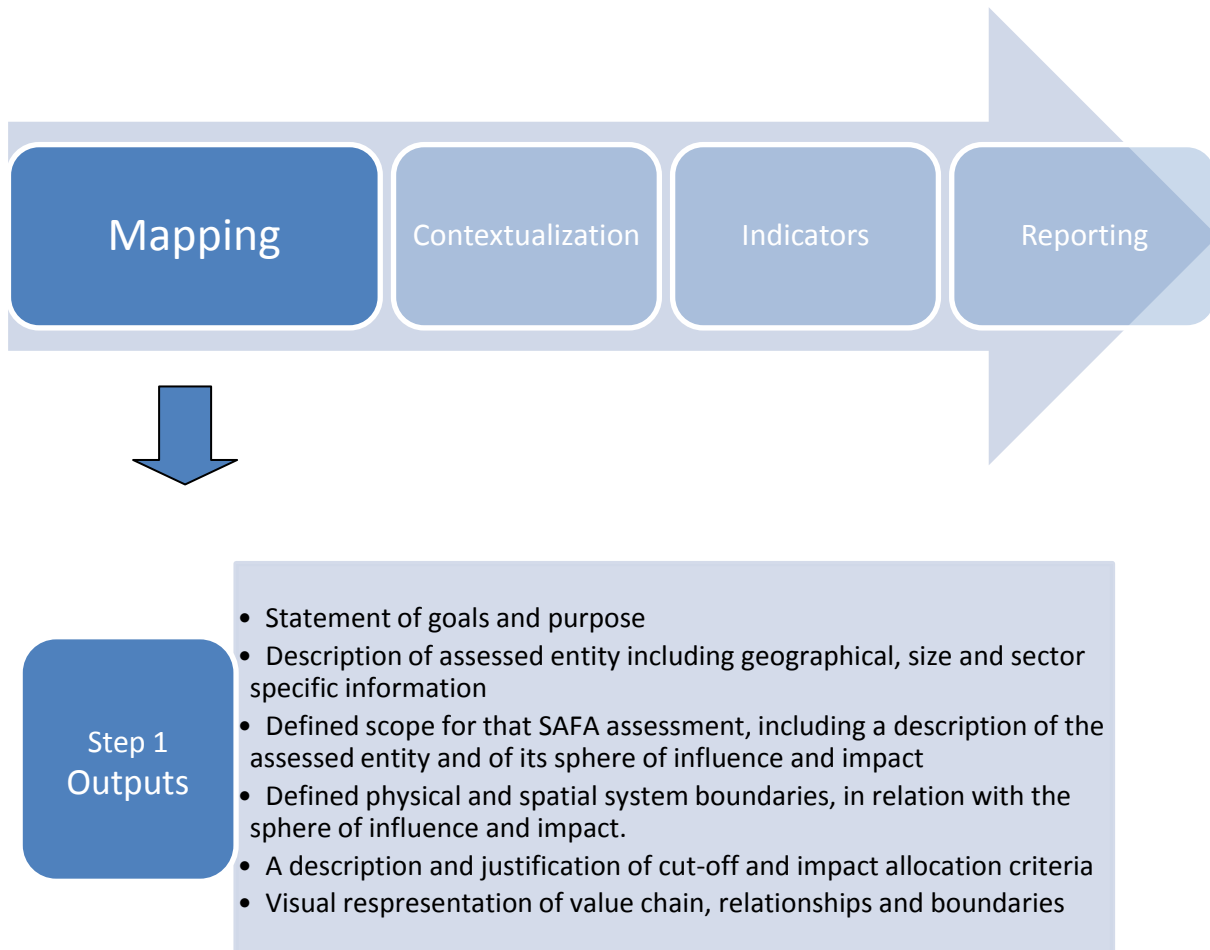
There are four main phases to a SAFA assessment (see Table 5). It is important to follow the sequence step by step because each phase builds the basis for the next. However, it may be necessary to repeat certain phases if during the assessment process it becomes clear that the scope needs to be modified. For example, if another operation is added to the assessment.

The final output of a SAFA assessment is the Performance Report, which contains both a descriptive and an analytical review of the sustainability of the assessed entities based on all four steps.

Table 5: SAFA step- by-step

Step 1 Mapping	Step 2 Contextualization	Step 3 Indicators	Step 4 Reporting
Description of assessed entities	Sub themes: review of sub-themes based on boundaries and sustainability objectives	Indicator selection	Polygon at aggregated and broken down to each dimension to illustrate sub-theme scores together with contextual issues including risk areas (hot spot issues), boundaries and data quality based on Accuracy score.
Boundaries of assessment (space and time) and visual representation		Irrelevant sub-themes and indicators are not selected	Final report, where all relevant issues and scope are treated and rationale, irrelevant sub-themes and indicators justified, areas for improvements are identified. See Appendix C: Performance Report Checklist.
What is excluded from SAFA? (cut-off criteria)		Guidance notes for indicators	
		Indicators: review core indicators in relevant sub-themes and use data regarding geographical, environmental, social, political and economic context to determine detailed ratings	
Relationships of different supply chain members		Determine Accuracy Score for each indicator	
		Documentation of input data and score	
		Rating at indicator level, aggregation of results at sub-theme and theme level	

Step 1: Mapping: setting goals and scope



Resources needed for Step 1 include organizational documents, value chain map and detailed description of assessed entities (e.g. type, value chain position, geography).

Step 1 consists of two main activities:

Setting Goals: defining the goals of the assessment and description of the assessed entities.

Setting Scope: identifying the boundaries of what will be included in the assessment.

Setting Goals

The goals should unambiguously state the reasons for doing the assessment, the intended audience and the intended use of the results (ISO, 2009).



Step 1 questions to be answered:

1. **Reasons** for doing SAFA
2. Intended **audience** of SAFA
3. Intended **use** of SAFA results

Basic description of the enterprise undertaking the SAFA

Basic information regarding the enterprise or entity undertaking the SAFA should be documented for the next step. This includes information such as the enterprise's size, sector and geography.

Setting scope and boundaries

Mapping the supply chain will enable the entity to understand what is being measured, where would the sphere of influence and direct control of the enterprise stop, what where the organizational and operational boundaries, and what interactions take place in the production network.

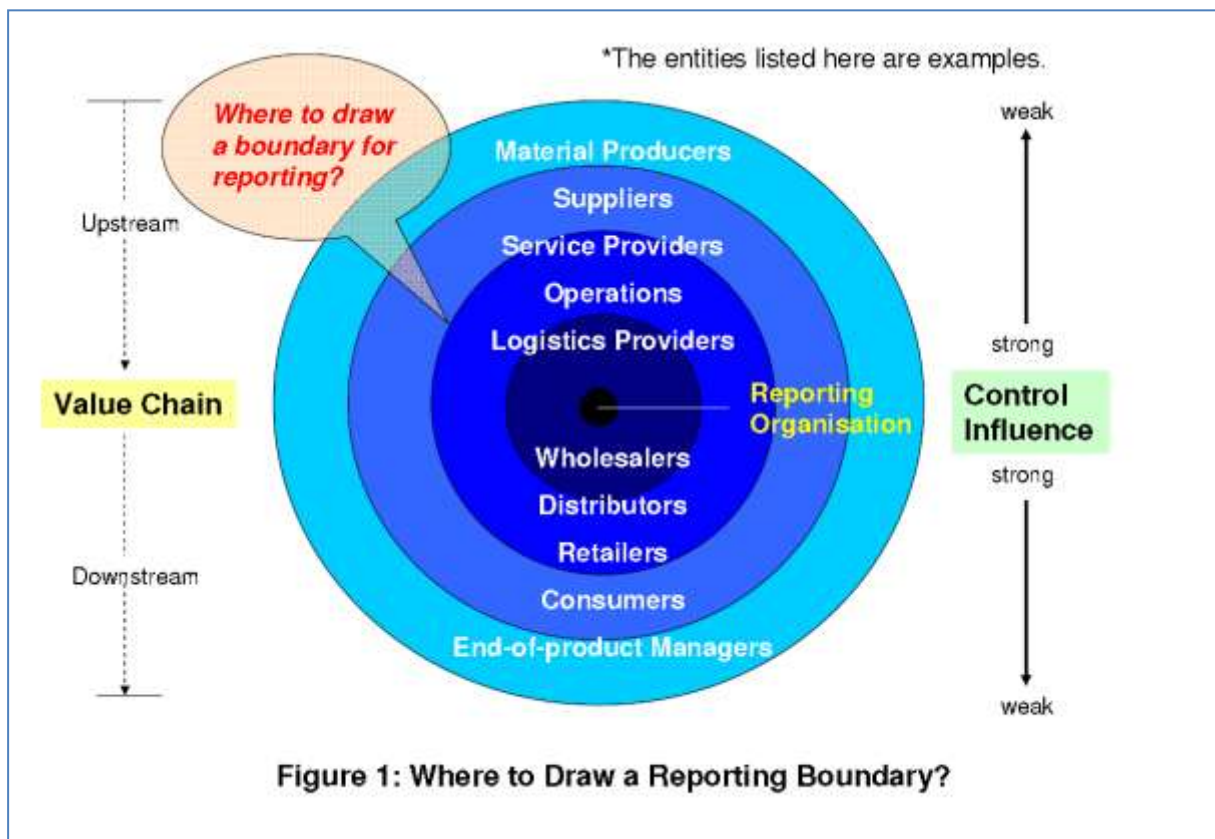
Setting scope and boundaries is problematic and one of the most difficult steps. In the real world, almost everything is ultimately connected with everything else. There are indefinite and blurring boundaries in numerous terms:

- spatially- difficult to limit to a geographically defined areas with influence and impacts extending, including indirectly;
- temporally - causes and effects change over time with indirect impacts.

This often requires expert judgement, particularly considering externalities². The following Figure 5 from the GRI Boundary Protocol highlights the complexity and factors for consideration.

² An externality is a cost or benefit which results from an activity or transaction and which affects an otherwise uninvolved party who did not choose to incur that cost or benefit.

Figure 5: GRI Boundary Protocol, January 2005.



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Assessing the sustainability performance of an organization is challenging, as almost everything is ultimately connected with everything else, directly and indirectly. No organization is wholly independent. Activities involving a complex network of value chain actors, sometime around the globe, affect and are affected by an organization's social, environmental and economic performance. The degree of influence and control over these value chain actors and the impacts can range from minimal to significant.

Mapping will facilitate the understanding of what to measure, where would the sphere of influence and direct control of the enterprise stop, what where the organizational and operational boundaries, and what interactions take place in the production network.

In order to obtain an accurate assessment of the entity's sustainability performance, a SAFA should ideally encompass the entire realm of influence and impact of the assessed entity. However, this is a complex undertaking in global supply chains. Thus, the scope should *focus* on what is significant in terms of impact and what is has control over. The scope of a SAFA assessment should include all processes:

- that are **part of production, processing or distribution**, (e.g. inputs such as fertilizers, feed and irrigation water, wages at processing facilities);

- that generate **significant upstream and downstream impacts** on sustainability in the surrounding environment and community (e.g. decisions regarding use of freshwater, waste management); and
- over which the assessed entity has **control or significant influence** regarding financial and operating policies and practices (e.g. the activities of any subsidiaries, other members in a producer group or procurement policy for inputs and suppliers).

For example, the production of procured raw materials and inputs should be included in an entity's SAFA assessment if: (i) the production and provision of these materials and inputs cause substantial sustainability impact (e.g. by aggravating regional water scarcity); and/or (ii) the extent of these impacts on sustainability could be significantly influenced by the buyer.

If a SAFA for every operation involved is not possible, the entity may choose to focus on one chain of operations as a representative sample. A common challenge is to determine a sample that gives an accurate picture of the entity's performance for reporting and the connected claim on performance. There is no one-size-fits-all scenario, but SAFA recommends using the boundary setting questions as a risk assessment as the basis for determining critical issues and hotspots. For large groups, the square root approach (ISO 62) is recommended. This means to use the square root of the number of the group members.

The full impacts of this entity should still be considered, including physical and social external impacts. Other important contextual factors for consideration in defining the scope include the sector and branch of the economy to which it belongs, its position in the value chain, its geographical location and organizational size.



A series of questions and activities will help the SAFA user to set the scope outlined below. While there is extensive literature on how to set boundaries, with different approaches and methodologies, an inclusion/exclusion approach is proposed for simplification purposes. While simplified, this process is aligned with the GRI Guidelines on Boundary setting.

INCLUSION:

First describe the value chain by identifying all enterprises linked with company undertaking the SAFA through a sustainability scan. These are **potential** spheres of influence and/or impact and include:

- all enterprises exchanging products or services (including materials, water, energy, etc) with the company;
- competitors - including through suppliers and customers.

Output: Description of assessed entities and supply chain map (see Figure 6).

Description of the entities

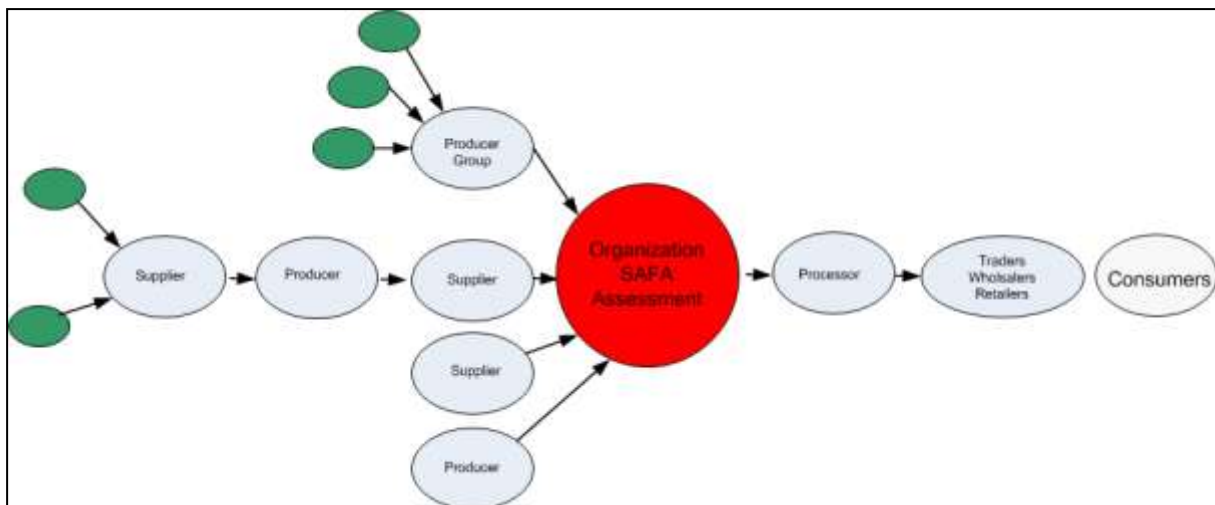
The description of the assessed entities should include the unique qualities of the entity's operation type, location, sector and surroundings, as well as information specific to the context including sector specific risks, geographical issues, socio-political circumstances and legal framework. This information will be used in Step 2: Contextualization.

Characteristics such as smallholders should be identified at this stage (see Smallholders and SAFA, including criteria for smallholders below).

Supply chain map

Mapping a chain means creating a visual representation of the connections between businesses from inputs to end consumers. It does not need to be sophisticated using custom software. A simple flow diagram in Word or Excel can help identify the potential scope and relationships to facilitate decision making on the scope. This should begin with entities listing all properties, operations, land and other sites under their ownership or in which they play a decision-making role. From there, the list should be expanded to include activities and other operations involved in production, processing and distribution based on the entire realm of influence and impact of the assessed entity.

Figure 6: Simplified supply chain example



International and larger companies will have multiple complex supply chains with potentially hundreds of entities that change constantly due to market forces. Bringing together data is further challenged in delimiting, describing and analyzing supply chains, especially when large, diverse and changing numbers of suppliers are involved.

Once the overall supply chain has been mapped and described, companies undertaking a SAFA should focus on those supply chains and aspects where it has significant influence and impacts, excluding others. This step of Exclusion of insignificant supply chain actors defines the Assessment Boundary, described in detail below. Management will find setting scope useful to identify where sustainability performance needs to be tracked and in what manner.

Defining the assessment boundary

EXCLUSION:

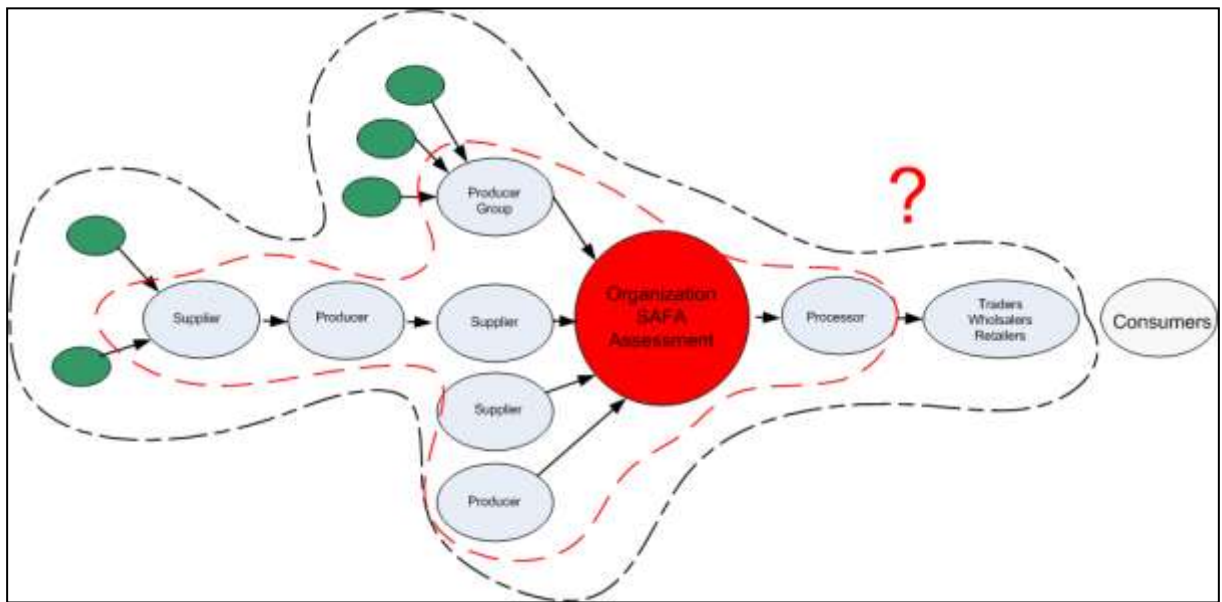
This step is also defined as cut-off criteria under ISO 14044 and in Life Cycle Analysis (LCA). This step is intended to help focus the SAFA assessment. Boundary setting needs to be pragmatic, well defined and specific. See Figure 7.

1. Define the **Material** (see box) system boundaries:
 - a. Which entity is the focus of this SAFA?
 - b. How many levels of the food chain you are intending to assess?
 - c. Which is the entity's sphere of influence?
 - d. Which other entities and processes need to be covered because of impact or risk areas?
 - e. If the focus of the SAFA is on primary production level, how many enterprises will you include and how will you choose your sample?
 - f. Which entities and processes are excluded and why?
2. Impact allocation criteria:
 - a. In conducting this SAFA, which of the governance, environmental, economic and social impacts that occur beyond what is directly used by the assessed entity do you intend to take into account?
 - b. How do you intend to allocate sustainability impacts for different levels of the food chain, for assessed and non-assessed processes, entities, and locations so that allocation problems are minimized and the impact boundaries for this SAFA are set clear?
3. Visual map boundaries on supply chain map:
 - a. Where a boundary is narrowed, the SAFA reporting needs to be transparent on what has been left-out from the assessment and why (see Step 4: Reporting).

Materiality

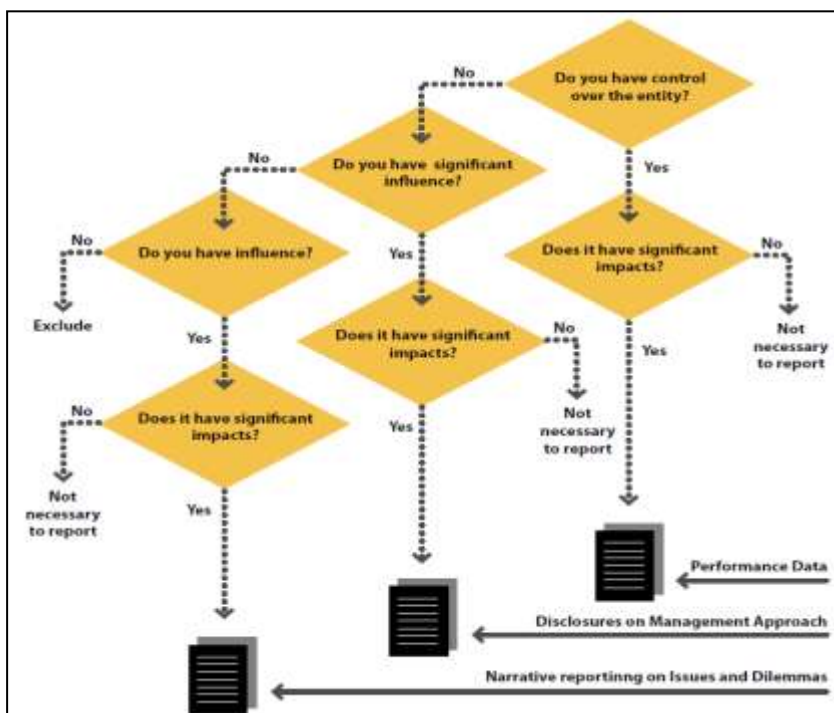
Materiality is a core principle of all kinds of reporting with different approaches and definitions. The materiality focus of sustainability reports is broader than the traditional measures of financial materiality. SAFA adapts the International Integrated Reporting Council (IIRC) definition framework which considers the commonality of materiality definitions from various reporting frameworks. The builds on the concept "that material matters are those that are of such relevance and importance that they could substantively influence the assessments of the intended report users."¹

Figure 7: Example of boundaries in a supply chain



Completing these steps will require that the entity make decisions regarding which activities and operations to include. Expert support may be useful. The decision tree of the GRI G3.1 Guidelines is a broadly tested tool for making decisions regarding what is included in the scope (GRI, 2011a).

Figure 8: Decision tree for boundary setting



Source: GRI G3.1 Guidelines (2011a)

The entity may nevertheless limit the scope of the assessment for one level of the food chain. In all cases, the boundaries of the assessment should be documented for use in the Performance Report. Larger companies have a potentially larger sphere of influence than a small individual farmer. SAFA acknowledges the growing responsibility for sustainable production with growing company size.

Smallholders and SAFA

SAFA aims to be applicable to both large and small-scale enterprises. Smallholders face many unique challenges in terms of sustainability assessments, including limited existing data, relevance of global indicators, lack of capacity to complete the assessment independently and lack of resources. Small scale operations may lack the resources to conduct testing or other expensive means of collecting primary data, or may be located in regions where this kind of data collection is not feasible.

SAFA was tested in smallholder settings to understand these issues and ensure the applicability of SAFA to smallholders, among other stakeholders. Creating a fair playing field for all users means, among other things, ensuring an equal burden in time and investment for all users. Smallholders may be achieving the intent outlined in the core performance indicators but may be achieving them through mechanisms that are less easy to measure compared to enterprises in which more formal and documented mechanisms exist. SAFA includes some sub-themes that specifically address some of the concerns specific to smallholders, as well as different types of indicators. The indicators and assessment steps have been adjusted in places to allow exceptions for smallholders, so that they might still reach high sustainability scores without required use of performance indicators, especially in the environmental dimension of the SAFA assessment.

Smallholders are not, per se, users of SAFA, but rather organizations of producers and governments. One incentive for smallholders' use of SAFA could be the compensation (e.g. through a Payment for Ecosystem Services scheme) of growers who adopt sustainable practices. Other uses of SAFA to incentivize smallholders include the implementation of regional planning, local procurement, investment or the development of legislation, based on SAFA smallholder performance ratings.

Classification of smallholders in SAFA

It is important to understand that there are different definitions of smallholders dependent on context, commodity, geography and other factors. These can be based on size, assets and/or other factors such as dependency on family labour. Their characteristics differ by sector, country and farming system zone. For example, not only does smallholder farm or holding size vary, but also their allocation of resources to food, cash crops, livestock and off-farm activities, their use of external inputs and hired labour, the proportion of food crops which are sold, and in their household expenditure pattern (FAO, 2004). Although differing, smallholders are often subsumed in initiatives targeting family farmers; for the 2014 International Year of Family Farming, the following definition was adopted: *Family farming (also family agriculture) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labour, including both women's and men's. The family and the farm are linked, co-evolve and combine economic, environmental, social and cultural functions.*

In order to ensure a transparent assessment, SAFA requires that smallholder enterprises should meet **all three of these criteria for farm systems**. For forestry and fisheries, the criteria remain the same, with modified definitions as outlined below. If smallholder enterprises complete a SAFA assessment, the ways in which the following criteria are met must be detailed in the SAFA Performance Report. For the purposes of implementing a SAFA and determining the applicable rating framework, smallholders – **including small-scale farmers, pastoralists, forest keepers, fishers** - are defined as:

- (1) **size**: manage areas considered small for their production and region;
- (2) **mechanization**: use no or little mechanization; and
- (3) **labor**: mainly use family labour for production.

1. Size

The most common measure of smallholders is size although there is no universal definition of small as it is sector and context specific.

Farm systems. Many sources define small farms as those with less than 2 hectares of crop land³. The size of land that smallholders manage varies among countries. In favorable areas with high population densities, they often cultivate less than one ha of land, whereas they may cultivate 10 ha or more in semi-arid areas, or manage 10 head of livestock (FAO, 2004). For the purposes of SAFA, a maximum limit of 10 hectares is adopted, in conjunction with the other two conditions.

Forestry. Smallholders is defined by those who own, manage or use forests which are considered small in size relative to the majority of the industry in their region. Smallholder forestry is also known as non-industrial or small-scale forestry. Forestry smallholders can also describe those who practice community forestry, where ownership and management are community controlled. In these instances, the land size may be larger than individual land holdings, but is still small relative to industrial forestry.

Fisheries. Also known as small-scale or artisanal fisheries, there is no definition of scale because of high diversity of small-scale fisheries. See other criteria.

2. Level of mechanization

Farm systems. Agricultural mechanization can be defined as the economic application of engineering technology to enhance the effectiveness and productivity of human labour. Sources of farm power include hand tools, draft animals and mechanically-powered implements. Most smallholder farm operations are accomplished through the use of hand tools and animal power since modern tools - even if rented or shared among users - are too costly. As part of its defini-

³ According to the IAASTD, 2009, there are 1.5 billion men and women farmers working on 404 million small scale farms of less than 2 hectares.

tion, smallholders have no or little mechanization of the planting, growing and harvest processes. The use of car, motorcycle, and small truck still falls within the concept of low mechanization.

Forestry. Smallholders are those who apply low intensity harvesting practices to timber and/or non-timber forest products.

Fisheries. Smallholder fisheries may be characterized as using low level of equipment as compared to the majority of the industry in their region or country, including man-powered boats or small vessels and engines.

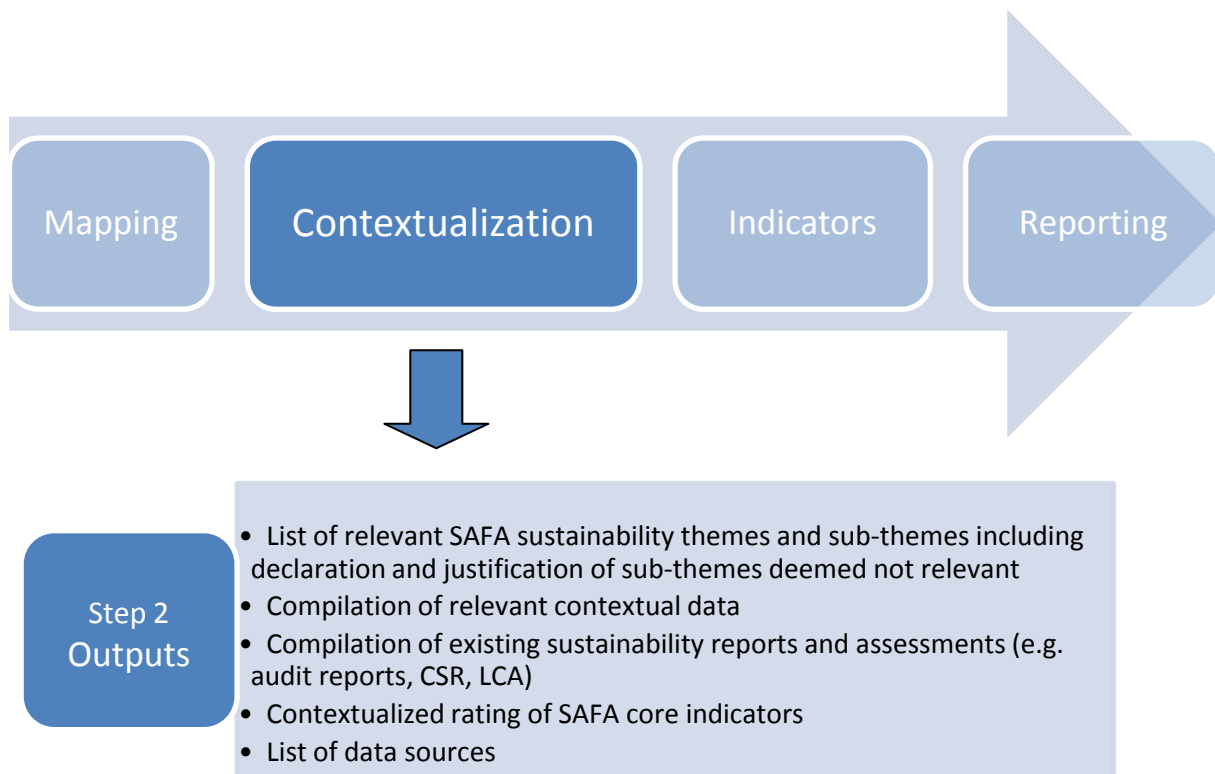
3. Labor Classification

All sectors. As part of its definition, smallholders are producers who are mostly relying on family labour, as opposed to hired labour. Even though most work is done by the family, depending on crop/region, smallholders may employ up to 2 non-family permanent employees and hire up to 5 seasonal employees.

In developed countries, the level of mechanization of smallholders may be higher than in developing countries. Similarly, farms growing certain crops (such as grains) may be generally larger in size than those growing other produce. Community farming, forestry and fisheries may also be considered under the smallholder classification if the general criteria are met for the individual members.

For farming and forestry operation, if an enterprise does not meet one of the above criteria, but does meet the other two, and the assessor believes this enterprise should be considered a smallholder for the purposes of the SAFA assessment, the assessment can go forward with this classification – **but** the exception must be clearly documented and justified in the SAFA Performance Report. For fisheries, smallholders can be defined using the above concepts within the FAO definition: *Artisanal or small-scale fisheries are traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips close shore and mainly for local consumption. They can be for subsistence or commercial purposes.*

Step 2: Contextualization



Following the step of detailed mapping and boundary-setting, the assessor will have collected a wide range of information about their context – meaning their geographic or regional circumstances, such as climate and resource availability, as well as their socio-political circumstances such as labour trends, legal framework and other such details. This information will also be used in this step to:

- include all relevant sub-themes; and
- contextualize SAFA's core indicators for assessment purposes.

The purpose of contextualizing the Core Indicators is to refine the measurements and ratings to be appropriate, based on the circumstances surrounding the entity assessed. The Core Indicators provide essentially a frame for how to rate the performance of the entity, ***based on the context of the entity***.



Resources needed for Step 2 include outputs from Step 1 including the detailed description of the assessed entities and critical impact areas defined in the boundary setting. List of Core Indicators (Appendix A).

Step 2 consists of two main activities:

Review of Sub-themes based on boundaries and sub-theme sustainability objectives;

Review core indicators in relevant sub-themes based on context to determine ratings.

Contextualize sub-themes

The assessor should begin with a review of SAFA's sub-themes, paying careful attention to the sub-theme objectives which describe the sustainability goal that should be achieved in that area of performance. Based on the boundaries identified in step one, the assessor may eliminate certain sub-themes that have objectives that are completely outside of the boundaries of that entity. For example, a farm producing only crops and having no livestock within the entity's boundaries or the scope of their influence may eliminate the sub-theme of animal welfare.

A series of questions for the specific sub-themes help the user identify the relevance for the entity to be assessed. Available publications, reports and maps should be consulted in this step to gather information necessary for finding out the relevance of certain sub-themes. For example, information related to physical water scarcity in the region, human rights situation, rule of law, soil degradation risk and land use cover change.

Sources used in this review should be included in the SAFA Performance Report. Sustainability sub-themes which are not included because of lack of relevance in terms of impact and influence should be detailed justified in the final Performance Report. All themes and sub-themes relevant for the sustainability performance of the assessed entity must be addressed in the subsequent steps in order to generate a Performance Report that is as accurate as possible.

Contextualize core indicators

Secondly, the assessor should review each of the core indicators in the remaining sub-themes and use the data about their geographic/environmental, social, political and economic context to determine detailed ratings for each indicator. The Core Indicators provided by SAFA already identify high and low ratings, which should be maintained. In some cases, few or no intermediate levels exist because the indicator is simply a "yes" or "no" that something exists, for example force labour. Either it exists or does not. If it does not exist, it will be "best sustainability performance". For most indicators, it will be necessary to contextualize an indicator to determine the intermediate ratings:

- a. Collect all relevant available data. Example: for part (1) of the core indicator "Right to Decent Livelihood" information on the regional living wage, average wage in the sector, legal minimum wage and poverty rate should be obtained, as well as information about overtime policies, and maximum work week averages.
- b. Review SAFA's rating frame provided in the Core Indicator description. The core indicator already provides that a green score is received if (among other things) all employees are paid a living wage for a limited number of hours per week, and a red score is received if workers are underpaid or forced to work beyond what is healthy to make a living. Using regional data, the assessor should be able to establish what a living wage is, and what a normal or legal work week is. Based on the living wage needs in their region, the assessor should also be able to establish what would qualify as "underpaid," and what would be considered excessive length for work week hours.

- c. Determine the contextualized rating scale. To contextualize the rest of the rating scale, a user would need to decide what wage rate and working hours in their region and sector earns a “good” score, what earns a “moderate” score, and what earns a “limited” score.

Examples of context considerations for rating:



- the size of the enterprise: for example, small enterprises can hardly be required to quantitatively analyze biodiversity (e.g. species abundance), while this may be feasible for large enterprises.
- the step of the value chain: are issues more relevant to specific step in the supply chain based on influence, control and potential impact?
- the type of value chain: are some issues more relevant to agriculture, forestry and fishery sector based on potential impact? For example, operations in agriculture and forestry have more potential to sequester carbon than those in fisheries, aquaculture, processing and retail.
- the region: are some issues specific to the region? For example: the relevance of water withdrawal is much higher in water-scarce than in water-rich areas; soil properties and thus soil fertility, as well as the potential to enhance soil organic matter content, *inter alia*, depend on the local climate and bedrock.

SAFA has not developed contextualized indicators. In order for a detailed SAFA assessment (the level of detail will depend on the purpose of the assessment) to be done on an enterprise, contextualized indicators must be developed by the assessor. Other organizations may also develop contextualized indicators using the SAFA framework (themes, sub-themes and core indicators) as a guide, in order to assess their particular enterprises, supply chains or projects.

This step of contextualization provides the basis for customizing the metrics in order to determine performance in the intermediate ranges between Best and Unacceptable practices.

Contextualized Indicator Hypothetical Example

Indicator: Right to Decent Livelihood, part (i)

Context: South-eastern USA

Unit of Measurement (given in SAFA): This qualitative indicator measures whether primary producers/employees (i) receive living wages from a limited number of hours a week from paid labour without compulsory overtime.

Unit of Measurement (contextualized version, part (i): living wages of at least \$14 per hour are received for a maximum workweek of 48 hours per week.

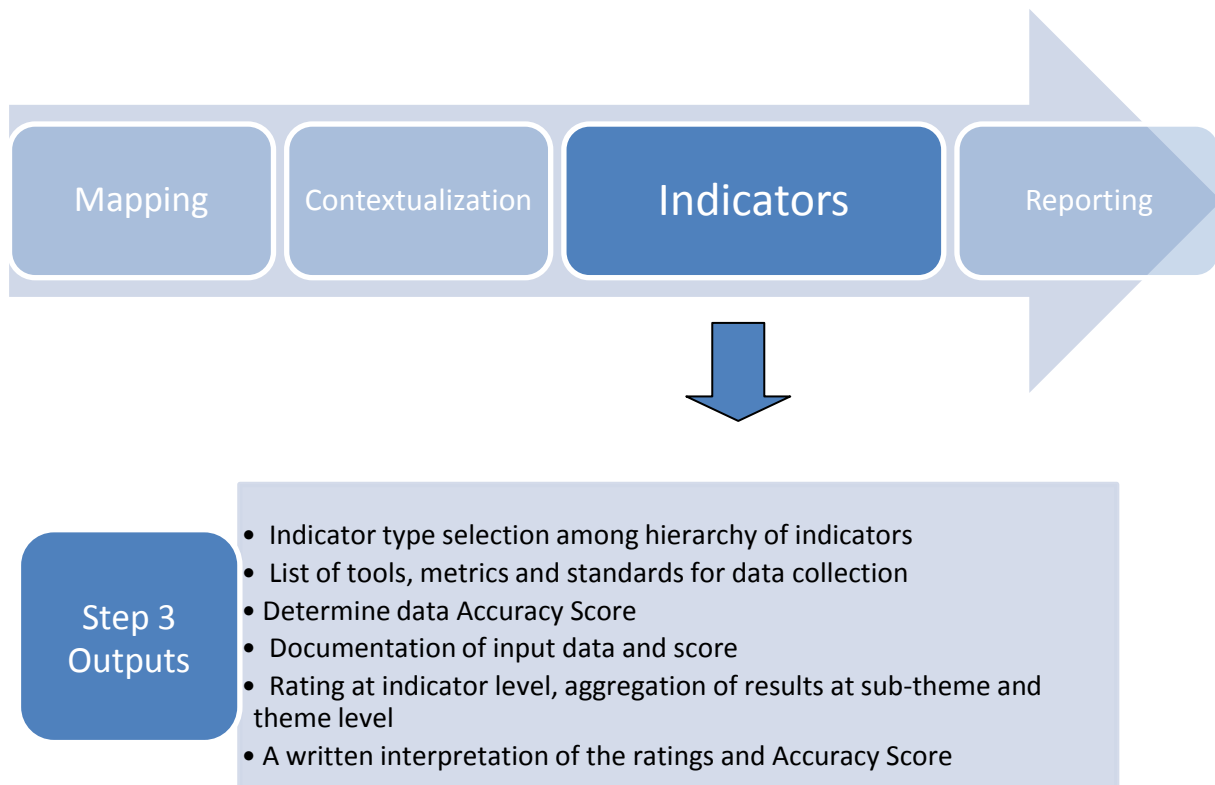
A hypothetical tool developed for use in the south-eastern USA with farmer associations may develop a contextualized indicator such as this one following the guidelines put forth in SAFA's core indicator that outline the requirements for Living Wage. Additional contextual details, such as exceptions or adjustments to the rating based on local circumstances, would also be added at this point.

Generally it will require expert knowledge and/or technical expertise. Industry associations, NGOs, universities and other groups working in sustainable agriculture will be key resources for identifying factors affecting performance. Some organizations already have identified a continuum of performance for specific products and geographies in databases of "better" and "best" practices. These lev-

els of performance may be reflected in percentages (RISE), icons (petals of a flower in the Sustainability Flower) or something else like metals- bronze, silver, gold and platinum levels of performance. Generally these different levels of performance are defined by experts based on research and knowledge developed over time. Potential resources of information for contextualization of indicators can be found in Appendix A: Core Indicators.

So while a SAFA has a core set of indicators for measuring to ensure a holistic approach, it is also important for the organization to identify critical areas based on materiality principles for the context of that entity. Where issues are deemed material in the contextualization phase, the SAFA Performance Report should acknowledge the relevance and disclose on those issues or admit limitations in data availability in the reporting (see Step 4 Reporting).

Step 3: Selecting tools and indicators



Resources needed for Step 3 include Contextualized Core Indicator List from Step 2, reports from existing schemes and tools used including certifications, assessments, LCAs, CSR reporting, etc.

Step 3 further refines the relevant contextualization of sub-themes through indicator selection and rating. Step 3 consists of four main activities:

- ✓ Selecting appropriate tools and data collection
- ✓ Calculation of Accuracy Score
- ✓ Selection and rating of indicators
- ✓ Aggregation of results

Selecting appropriate tools and data collection



For the purposes of the SAFA assessment, “tools” refer to the variety of commonly used measurement systems or assessment techniques for different sustainability topics. For example, there are many tools for assessing an enterprise’s greenhouse gas emissions, such as the GHG Protocol Corporate Accounting and Reporting Standard, the CoolFarm and the ExAct tools. Ideally, the entity would be able to collect necessary data using existing tools, metrics and standards. Some of potential resources are found in Appendix B.

The sustainability tools and initiatives identified in Appendix B can provide some additional guidance in identifying appropriate standards and tools. The selection of tools should be based on:

- the core indicators;
- the availability of information on the entity's performance; and
- the budgetary constraints of the assessment.

The tools, metrics and standards used for data collection and measurement should be listed in the SAFA Performance Report, along with the Accuracy Score.

Data collection

Data collection is the process of gathering and measuring information on the core indicators, in an established systematic fashion in order to evaluate outcomes. Within a SAFA, primary and secondary data can be used.

Using existing tools and data

Secondary data has been collected by someone else, generally for another purpose. Secondary data is relatively inexpensive (or already paid for) to obtain. However, because it was gathered for other purposes, it may be necessary to tease-out the information needed for the SAFA assessment. SAFA recognizes existing sustainability programmes and efforts as key data resources. The use of existing rules, norms and standards expedite assessment for users, while avoiding duplication by integrating existing data. Appendix B provides some examples of partner initiatives for potential data sources. SAFA is coordinating with existing meta-initiatives and tools, as well as the establishment of a common taxonomy including the SAFA framework, components of a sustainability assessment and definitions in order to facilitate common understanding and equivalencies among different initiatives. Data can also be collected from public and other independent sources of information. However, the use of existing data collected for a different purpose needs to be addressed in the assessment, both in the data collection process and the reporting.

Caution must be taken when relying on best practices or estimations/proxies which create variances and subjectivity of performance. In addition, there are variances in temporal scope and timing of the data collection that influence the usability of existing data. These issues must be considered. There may often be a direct trade-off between feasibility (costs, time and availability), particularly for smallholders, with accuracy of the performance assessment.

Primary data

Directly collecting the data needed has the advantage of being specifically tailored to the SAFA assessment and indicator. Primary data tends to be expensive to collect and takes a long time to process. Entities undertaking a SAFA can supplement this existing data with site visits, scientific sampling, interviews, stakeholder surveys and reviews of their internal documents and programmes within the SAFA Framework. The methodology is reflected in the Accuracy Score.

Data collection guidelines

For some indicators, data collection is especially difficult, as well as measurements in relation to the “best achievable targets”. In some cases, exact thresholds are region-specific and require expert knowledge. Especially in the environmental dimension (e.g. air, water, biodiversity), degradation drivers are often independent of the enterprise’ management, extending to larger ecosystems and wider timelines.

While SAFA cannot determine specific data protocols that would be applicable globally, SAFA reporting would require transparency on the data collection protocols (timing, content and type of data which are reflected in the Accuracy Score.

In small enterprises with low levels of documentation (e.g. small producer groups or farms), almost all enterprise-related information will likely be collected via a farmer interview and a personal inspection of farm and fields. This means that the “how” and “when” of data collection can have influence on data quality and SAFA results.

Before and during data collection:

- ✓ identify potential data sources and challenges and the precautionary measures to maintain the integrity of the assessment (e.g. timing issues, proxies);
- ✓ document data accuracy and quality issues using existing data;
- ✓ access and organize existing data and sources (e.g. CSR/Audit reports, assessments);
- ✓ map existing data with SAFA sub-themes and core indicators;
- ✓ identify data collection plan to fill in gaps with plan;
- ✓ Determine (and create, if necessary) a method for collection, storage of data and retention of data, merging existing and supplemental data;
- ✓ during data collection, the entity should monitor and support data collection activities;
- ✓ use the most precise and reliable performance data available;
- ✓ data should be collected using standardized measurement methods; where quantitative data are used, these should be expressed in the International System (SI) units.

Determine Accuracy Score: quality of data used in SAFA

As explained in the Data Collection step, there are many potential sources for data that SAFA users may access to implement SAFA indicators. The accuracy of the final ratings and the SAFA report will depend on the quality of the data used. In some situations, it may be possible for an enterprise to access high quality data for some indicators but not for others. In order to increase the transparency and credibility of the SAFA results, an Accuracy Score determined by quality of data used is a part of the SAFA Performance Report.

Understanding the Accuracy Score		
Characteristics	Provides a snapshot of overall integrity of the assessment Guides SAFA users as to where to focus resources for improvement in data collection and sustainability assessment in the future Does not impact the rating (red to green) of indicators, sub-themes or themes Can be completed simultaneously to indicator rating in the assessment process Based on the quality of data, determined by the assessor using SAFA's criteria	
Components	Timeframe	Is the data based on the most current information about the enterprise?
	Type	Is it primary data, secondary data, or a general estimate?
	Methodology	Was the data collected according to SAFA guidelines?

Components of the Accuracy Score

The components of the Accuracy Score include the Timeframe, Type and Methodology, all of which play a role in determining the quality of the data used in SAFA and the scoring.

Timeframe of data

Different types of data may need to be collected on different timeframes. For example, data regarding energy and water use may be calculated at multiple times per year, while data regarding living wage for the region may be updated annually. The most accurate data will be the most current available. Ideally data used in SAFA assessments will be no older than 1 - 2 years, unless otherwise requested in the indicator measurement instructions.

Data that is older than 2 years may still be reliable, and may be used if more recent data is not available, though this will lower the Accuracy Score to "moderate quality."

SAFA recommends that data older than 5 years be refreshed if possible. If used, this data would receive an Accuracy Score of "low quality."

Type of data

There are various types of data, as described generally in the "Data Collection" section of the SAFA Guidelines. To assign an Accuracy Score to the data quality, SAFA considers whether the data is primary, secondary or estimation:

- High quality: primary data collected for the SAFA assessment, or primary data collected using a sustainability tool, for a previous audit or by a 3rd party;
- Moderate quality: secondary data used as a proxy to make a generalized but educated assumption regarding the enterprise;
- Low quality: estimates made based on general information about the enterprise that are not based on primary or secondary data.

Methodology of data collection by type of data

The appropriate methodology for collecting data depends on the type of data and the subject matter of the indicator. The following sections describe minimum guidelines for the methodology to collect accurate data to be used in the SAFA assessment according to each type of data: primary, secondary or estimations.

Primary data. There are two main methodologies for collecting primary SAFA data.

1. Primary data collected by third party or using a sustainability tool

Primary data about the enterprise's activities may be in the form of audit reports or existing certifications, or other such data sources generated by third parties. In addition, there are many sustainability tools that assist users to calculate information such as carbon emissions. Primary data from these tools, listed in SAFA Guidelines Appendix B, is highly recommended for use in SAFA assessments.

In regards to certifications: the fact that the enterprise has passed a certification inspection does not in itself serve as a data source for that enterprise in reference to the certification's standards. The report and detailed information about actual activities found to be in compliance with the individual standard requirements must be documented in the report for this data to be considered highest quality in a SAFA assessment.

2. Primary data collected directly for the SAFA assessment purpose.

Primary data collected by the assessor for the SAFA itself is considered highest quality within the different dimensions based on the following:

Dimension	Highest quality data criteria or type used in each dimension
Governance	Current business documents or records (such as personnel manuals, organization's by-laws, etc). Sources may be website or company records.
	Interviews with stakeholders that meet interview criteria*
	Interviews with management and senior management that meet interview criteria* (Interviews with management in this dimension may be used as a means to confirm certain data, but should not replace review of actual company records where relevant)
Environmental	Direct sampling or testing (soil tests, waste water tests)
	Company records of current resource use such as utilities (electricity, water) or fuel for transportation
	Visual inspection of grounds and facilities that meets inspection criteria**
Economic	Review of actual company records and bookkeeping
	Current business plan or other financial planning documents
	Interview with bookkeeper or management (for secondary information or confirmation of data, not to replace review of actual records where relevant)
Social	Interviews with employees that meet interview criteria*
	Review of employee files, and related paperwork such as pay-stubs
	Physical inspection of workplace and facilities that meets inspection criteria**
	Interviews with suppliers that meet interview criteria*
	Interviews with supervisory staff, HR, or management that meet interview criteria*

*** Interview Criteria**

Highest quality data for some indicators requires interviewing various individuals. Data from interviews can only be considered highest quality if at least the following criteria are met:

- a. How many individuals are interviewed? (Best data - random sampling that includes members of staff groups with all diversity factors including age, gender, ethnicity, seniority at the enterprise, vulnerability factors such as disabilities, etc)
- b. Who conducts the interview? (Best data - Interviewer must not be management or a supervisor, should ideally be someone external to the enterprise, needs to speak the language of the employees and be sensitive to labor issues.)

**** Inspection Criteria**

Highest quality data for certain indicators requires an inspection of the facilities or workplace itself. In these cases, the inspection ideally should not be completed by management. Ideally the inspection will be completed by a 3rd party or trained individual outside of the enterprise, unaccompanied by management.

Secondary data

SAFA users may not always be able to collect primary data for all indicators. In some cases, secondary data may provide a reliable source from which assumptions about the performance of the enterprise being assessed can be drawn. In this case, the assessor should make sure that the secondary data used is current, and published by a reliable source. Preferably statistics or scientific information used as secondary data will come from a peer-reviewed source.

SAFA users will need to assess based on their own judgment if the quality of the secondary data used is the best available. If it is, this data may be considered moderate quality. If it is not, this data should be considered low quality.

Estimations

The final type of data that may sometimes be used in a SAFA assessment are estimations, generally made by the enterprise management or staff themselves, regarding the performance of the operation. An important distinction to make is that estimations are different from data collected in interviews. For example, the assessor may estimate that a farm operation uses xx quantity of fuel per year, and assume their carbon emissions impact from this estimate. In the absence of documentation, the ability to test or complete a tool or calculation, or the ability to draw from reliable secondary data, estimates may be used to complete the SAFA indicators. However, these should be considered low quality data, and points for improvement in data quality in the future.

Steps to determining your Accuracy Score

The basic steps to determine your Accuracy Score are determined by the components Timeframe, Type and Methodology described in the previous section. With that information, an Accuracy Score can be determined for the SAFA Performance Report.

1. **Determine quality level of each core indicator and assign score.** After rating the performance for an indicator, consider the quality of the data used for the assessment. Assign scores per indicator based on whether the data is highest quality, moderate quality or low quality.
2. **Calculate the average at sub-theme level.** Once Accuracy Scores have been assigned to all indicators in a sub-theme, an average score can be calculated for the sub-theme as a whole. A mathematical average may then be taken for each sub-theme by adding up the total points and dividing by the total number of indicators. If this math results in ½ points, users are encouraged to round down to the lower score.
3. **Calculate the average at theme and overall level.** After all sub-themes have been scored, accuracy scores can be assessed at the theme level, and a final overall score can be established as well, using the same principles.

The final overall accuracy score will be reflected in the SAFA Performance Report. A simple checklist can help in calculating the data quality Accuracy Score.

Data quality per indicator	Criteria	Checklist	Accuracy Score
Highest quality data	Is data current ? Maximum 1 - 2 years old.		3
	Is it primary data collected directly for SAFA (according to methodology guidelines)?		
	Is it primary data from previous 3rd party audit or sustainability tool?		
Moderate quality data	Is it primary data older than 2 years, but considered still reliable?		2
	Is it secondary data?		
Low quality data	Is it primary data older than 5 years?		1
	Are they estimations or proxies?		

Selecting core indicators and rating thresholds

For conducting a SAFA, indicators are specific measurements or assessments that provide evidence as to whether or not a certain condition exists. By using indicators, an entity can demonstrate their level of sustainability performance on the SAFA themes and sub-themes.

There are different understandings of what a metric, indicator and performance indicator consist of. In an effort to create a common vocabulary, SAFA defines a set of terms that will form the basis of the framework and assessment:

- an indicator provides evidence that a condition exists or certain results have or have not been achieved, and can be either quantitative or qualitative;
- a metric refers to a unit of measurement that is quantitative.

Types of indicators

All indicators are not created equally and provide different evidence depending on the type.

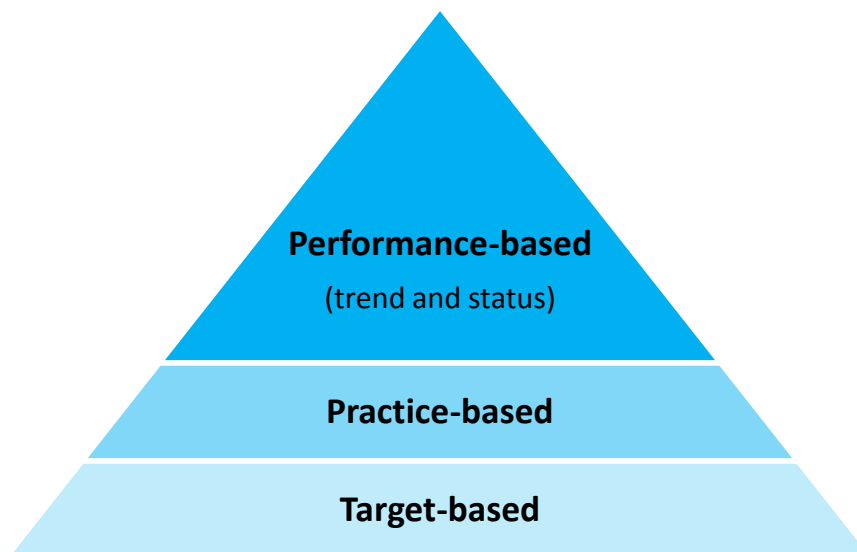
Performance-based indicators, also called results-oriented or outcome indicators. Performance based indicators are focused on the results of compliance with an objective and can measure the performance of an operation, identify trends and communicate results.

Practice-based indicators, also called prescriptive or process indicators. These indicators are focused on the prescribing the necessary tools and systems required to be in place, best practices. These indicators are process rather than outcome-oriented. These indicators assume that having (water or health and safety) management systems in place leads to better management of environmental or health and safety issues. The cause-effect between a given practice and a result is however never precise; in fact, there is no science agreement most important topics, such as the cause-effect of management practices on greenhouse gases and climate change. Thus, one can assume that a practice may yield a desired result but with a substantial margin error.

Target-based indicators. These indicators focus on whether the operation has plans or policies with targets with ratings based on steps towards implementing them.

SAFA core indicators strive to be measurable, verifiable performance-based metrics. These indicators focus on outcomes or results of the entity; do not prescribe certain practices, as what matters is effective delivery of sustainability. In fact, **it is reaching the sub-theme objective that matters**, while a multitude of means is permitted to achieve that objective, including innovations. However, there are sometimes scientific and economic limitations (particularly for smallholders) inherent in some types or contexts of performance measurements. In these instances, SAFA proposes core indicators that are practice-based that have been correlated to performance outcomes (best management practices), which are particularly more appropriate for smallholders.

SAFA includes a hierarchy of indicators as outlined in Figure 9. Performance-based indicators are more relevant and effective than practice-based indicators in demonstrating performance and impacts and are thus at the "top of the pyramid". Where no relevant practices are implemented, SAFA looks for the lowest indicator of intent to improve, that is, Target-based indicators. These are necessarily at the "bottom of the pyramid".

Figure 9: Hierarchy of indicators

SAFA's core indicators were developed based on expert analysis of what the most critical individual components of a sub-theme are that must be measured in order to assess sustainability at the sub-theme level. Core indicators are applicable at the macro level – meaning to all enterprise sizes and types, and in all contexts. Core indicators serve the purpose of providing standardized metrics to guide future assessments on sustainability. However, core indicators only contain the frame for the rating scale. Within the guidelines, core indicators have a rating definition of the top level of sustainability performance (green score) and examples of the unacceptable levels of performance (red score), but they do not contain full rating scales (as this is only possible at the contextualized level) and are not a sufficient indicator set from which to complete an assessment by themselves.

The primary goal of core indicators is to measure or assess performance. However, in some sub-themes, assessing performance may require access to data that is difficult for certain users to collect or it may not be currently possible, particularly for smallholders. At the same time, another challenge facing performance indicators is that in some cases one metric or measurement is not enough to give a satisfactory analysis of sustainable performance. This is particularly true for the environmental dimension which includes multiple types of indicators for all of the sub-themes.

All of the SAFA core indicators can be found in Appendix A: Core Indicators. In this Appendix, each core indicator is detailed in terms of: an overall description; relevance to the enterprise type (e.g. size and supply chain level); unit of measure or metric; how to measure the indicator; ratings; limitations of the core indicator; and sources for further information on that specific core indicator. The result of this phase is a list of the best indicators for the sustainability performance, based on the unique qualities of the entity's operation type, location and surroundings.

Threshold determination

SAFA seeks to offer a fair playing field to assessing all types of enterprises across regions and sectors. While flexibility is required to account for the diversity of settings, subjectivity needs to be minimized in order to secure fairness of the SAFA outcomes. The SAFA scoring system is crucial to this end.

Core indicator rating

SAFA offers a 5 scale rating for performance. Generally the best rating and unacceptable practices are defined with the three middle ratings defined by the user based on context. This is detailed per indicator in Appendix A.

Performance	Percentage scores
BEST	80-100%
GOOD	60-80%
MODERATE	40-60%
LIMITED	20-40%
UNACCEPTABLE	0-20%

Core indicator weighting

In order that all sub-themes are weighted equally, it is necessary to weight indicators in instances where there are multiple indicators at the sub-theme level. The vast majority of sub-themes only have one indicator so no weighting is necessary. While a few governance and economic sub-themes have multiple indicators, the main dimension where weighting is a critical step is the environmental dimension, for which ALL of the sub-themes have three or more indicators.

Number of Sub-themes	Multiple indicators <i>per</i> Sub-theme	
	3 or more	1 or 2
Environmental	13	
Governance	1	15
Economic	3	10
Social		15

The different types of indicators within the SAFA system have varying weight in terms of their likelihood to fulfill the sub-theme objective. Those that are performance indicators can be considered very accurate, because they require the collection of primary data on the enterprise. Those that are proxy indicators (practice indicators) however are less accurate, as they are a good estimate of performance but do not measure actual impacts. And finally those that are target, policy or documentation indicators for example, do not necessarily reflect performance.

For these reasons, SAFA has developed a system to differentiate between indicators types. The goal of this system is to give higher weight to performance indicators.

When discussing ratings, SAFA differentiates between rating in the environmental dimension, where different types of indicators (target, practice and performance) coexist versus all other dimensions where indicators do not follow a hierarchy but have equal standing within each sub-theme.

Rating sub-themes in the governance, economic and social dimensions

All relevant indicators have to be chosen for a SAFA assessment in the governance, economic and social dimensions. Given that all sub-themes have the same weight, and in several sub-themes, more indicators are present, the weight is distributed evenly among indicators within each sub-theme in these dimensions, as the following table shows.

IF Number of indicators per sub-theme is:	THEN Indicator weight in the governance, social and economic dimensions
1	100%
2	50%
3	33%
4	25%

Most sub-themes will receive the same score as assessed for the indicator as there is only one indicator (red/orange/yellow/light green/dark green) and no need for weighting. In case there are two indicators in a sub-theme in these dimensions, the mean has to be taken of the two scores, which have equal weight in the overall sub-theme score. If the mean is not possible, the lower score needs to be given (for instance if one indicator rates "yellow" and the other indicators rates "orange", then the sub-theme will be rated as "orange"). In the few instances in the economic and governance dimension, which have three and four indicators within a sub-theme, the same rules apply: taking the mean or the lower score. An easy way of calculating this is giving points to each color code:

Rating	Score
BEST	5
GOOD	4
MODERATE	3
LIMITED	2
UNACCEPTABLE	1

For example if we have three indicators in a sub-theme:

- the **maximum** potential score is 3 indicators x 5 points (best/green) =15
- the **actual** ratings are 2 yellow indicators (2 x 3) and one dark green indicator (1x5) = 11
- divide the **actual** total score by the **maximum** total score (11/15=0.73)

Our final sub-theme score is 73%. This is between 60 and 80%, which corresponds to the light green rating.

Indicators which were deemed irrelevant with clear rationale could be omitted, thus changing the total **maximum** score for that sub-theme in question. For instance, if one indicator is irrelevant in a sub-theme which has four indicators, then the maximum score will be 15 (3 x 5) instead of 20 (4 x 5).

Rating sub-themes in the environmental dimension

The environmental dimension sub-themes have multiple indicators and indicator types: target, practice and performance. The majority of the sub-themes have 3 or more indicators. This difference from the other dimensions has multiple reasons. So while the combination of target, practice and performance indicators are always the "preferred" SAFA approach, alternative indicators are necessary to address the barriers and challenges of smallholders outlined in the "Smallholders and SAFA" section. In addition, there is some research and scientific evidence linking good agriculture practices to performance done around the world.

The hierarchy of the indicator types needs to be reflected in the overall rating of each environmental sub-theme. All indicators need to be chosen, with smallholders allowed the exception. Smallholders, for whom data for some performance indicators may be too difficult to collect, can omit the performance indicators, with documentation in the SAFA Performance Report.

All SAFA sub-themes have equal weight and all environmental sub-themes have at least three indicators:

- Performance indicators receive the most weight.
- Practice-based indicators or those that are determined to be a valid proxy for performance or impact are given the second most weight. (except for smallholders for whom performance indicators may be impossible to measure – for them practice-based indicators could represent the highest in the hierarchy).
- Target-based indicators based on documentation, presence or existence of policies, plans, and targets or monitoring are given the lowest amount of weight.

Table 6 highlights the different rating scales for the hierarchy of indicators in the environmental dimension.

Table 6: SAFA core indicator types and rating scales for the environmental dimension

Indicator type and description	Potential responses	Rating scales
Performance indicators are considered those that take a direct measurement, utilize primary data from the operation itself, or otherwise calculate the actual impacts of the operation on the sustainability issue.	Yes/no/partial Percentage	80% or more/Yes - SAFA defined
		60% - 80% - User Defined
		40% - 60% Partial - User Defined
		20% - 40% - User Defined
		20% or Less/ No - SAFA defined

Indicator type and description	Potential responses	Rating scales
Practice-based indicators are those that identify certain practices which, based on general industry consensus or secondary data (such as scientific evidence), have been determined to be a proxy for a certain level of performance i.e. considered "best practice". It may also be easier for small-scale operations to collect data on practices than on measurements for performance.	Yes/no/partial List of practices	List of best practices - defined by SAFA Core Indicators
		List of practices - User Defined
		List of unacceptable practices - defined by SAFA Core Indicators
Target indicators in SAFA refer to indicators regarding the existence of a plan or policy with a particular sustainability target, such as "GHG reduction by 10%" or others. The intention behind these indicators is that the enterprise has a plan with a target that matches the SAFA sustainability goal for that sub-theme. Primarily used in environmental dimension.	Yes/no/partial	Written plan and steps taken towards targets
		Written plan available to all stakeholders but no steps towards target Or Set Target, steps taken, no written plan Or Written plan, steps taken but not available to all stakeholder
		No requirements met

Thus, the following weighting applies to the environmental indicators:

Target (T) indicators = 1 point

Practice (R) indicators = 2 points

Performance (P) indicators = 3 points.

The following combination of indicators exists in the environmental sub-themes. These points are given only in case of the best scores are achieved in individual indicators. Thus the table represents the **maximum potential** score per sub-theme.

Combination of indicator types in the environmental dimension	Maximum potential indicator points in the environmental dimension
T - R - P	1+2+3= 6 points
T - R - P - P	1+2+3+3 = 9 points
R - P - P - P	2+3+3+3 = 11 points
R - P - P - P - P	2+3+3+3+3 = 14 points
T - R - P - P - P	1+2+3+3+3 = 12 points

The rating is different when the best score is not achieved in any of the indicators:

Rating	Target indicator points	Practice indicator points	Performance indicator points
BEST	1	2	3
GOOD		1.5	2
MODERATE	0.5	1	1
LIMITED		0.5	0.5
UNACCEPTABLE	0	0	0

Target indicators only have three options and the maximum potential score is 1. So the possible responses and ratings are "yes" (best= 1); "partial" (moderate = .5) and no (unacceptable = 0). Practice and performance-based indicators have a 5-scale rating so there are more point scales.

As an example, if we take a sub-theme with three indicators (T-R-P) and a SAFA assessment of T scored dark green, R dark green and P yellow:

- total **maximum potential** score is $1+2+3 = 6$
- total **actual score** is 1 (T dark green best) + 2 (R dark green best) + 1 (P yellow moderate) = 4
- final score for the sub-theme is $4/6 = 66\%$.

This is between 60-80%, which corresponds to the Good/Light Green rating.

Rating for smallholders/irrelevant indicators in the environmental dimension

Smallholders may opt to omit performance indicators, thus when aggregating indicator scores; they should also take out scores for the performance indicators that they do not use. The same applies to those indicators which are not relevant to an enterprise.

To illustrate this: a smallholder determines that they cannot feasibly calculate the performance indicator "GHG balance" in the Greenhouse Gases sub-theme. As a P indicator, it has a potential maximum score of 3. As a consequence, 3 should be subtracted from the total maximum potential score for that sub-theme.

The final report should list and provide rational for all indicators which were omitted during the assessment either due to a) smallholders not being able to collect data or b) irrelevance of the indicator question to the enterprise.

An enterprise may choose to only use certain indicators in each sub-theme, if certain types of data are unavailable. However, the overall score will be lower than if all indicators are chosen. The enterprise can therefore receive the highest score by selecting *all* of the core indicators in their assessment.

Rating at the theme level

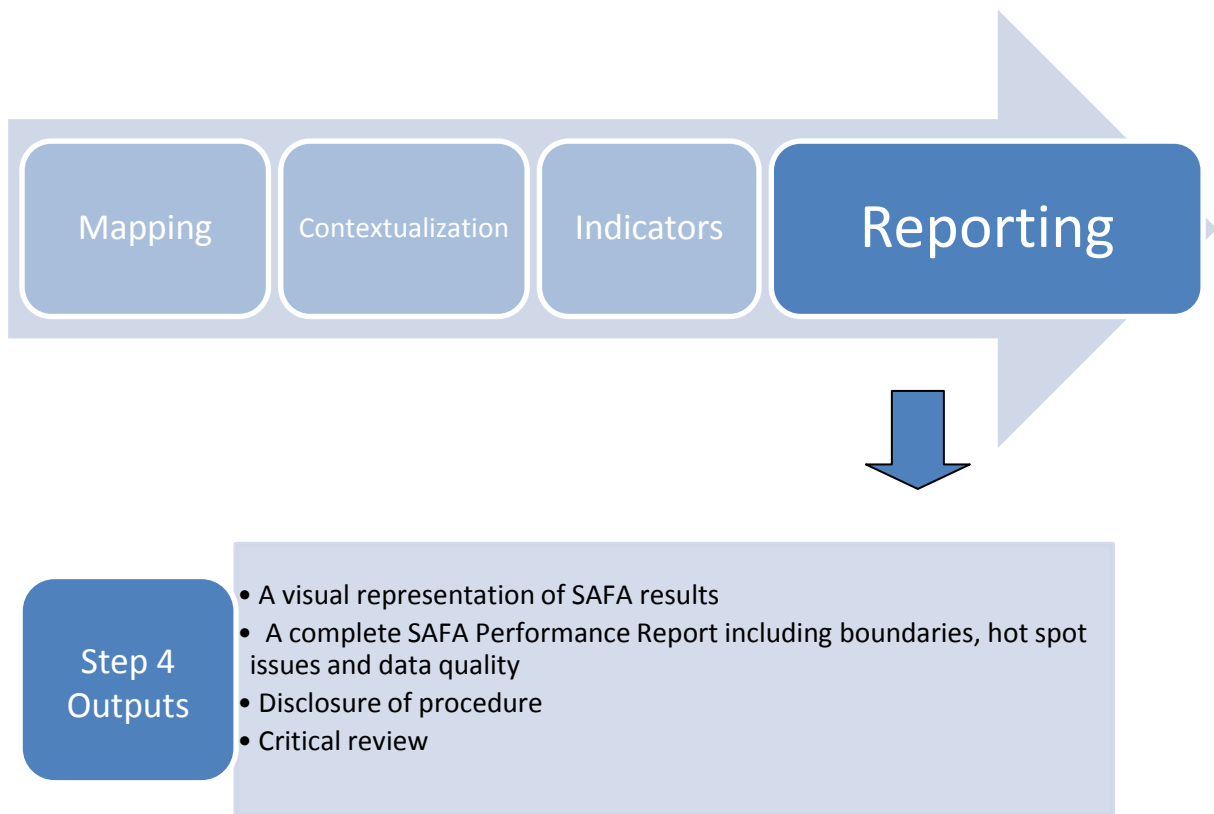
To obtain a performance score at the theme level, several sub-theme scores have to be aggregated into a single score. Each sub-theme score weights the same. The entity should calculate an arithmetic mean of the sub-theme scores, or if not available on the lowest score basis. The following guidelines should be applied:

- The calculation process, including rules for aggregation and weighting of indicator values - must be transparent, with all decisions presented and justified in the Performance Report.
- Data insufficiencies can sometimes require the estimation of certain values; in order to ensure transparency, the Accuracy Score should be included at sub-theme and theme level.
- Decisions on must be justified and described.

During the interpretation of results with regard to context, a holistic approach should be adopted. The assessed entity should be perceived and understood as a whole because of the inter relationships of themes and sub-themes. For example, results for the Freshwater, Land and Biodiversity themes may be linked with the same activities, such as soil tillage, use of crop protection products and wastewater discharge. Such linkages should be identified and addressed explicitly, as the resulting synergies, trade-offs and side effects of activities will affect the planning and implementation of improvement measures.

All types of aggregation have in common that a gain in communicability is accompanied by a loss of information and a risk of relevant information being masked. All aggregated reporting should be done transparently with any decisions or judgment calls justified clearly in the SAFA Performance Report. Sub-themes and themes with low scores are useful for identifying areas of improvement and should be highlighted in the SAFA Performance Report.

Step 4: Reporting



Resources needed all documentation notes from Steps 1-3.



Appendix C. SAFA Performance Report checklist.

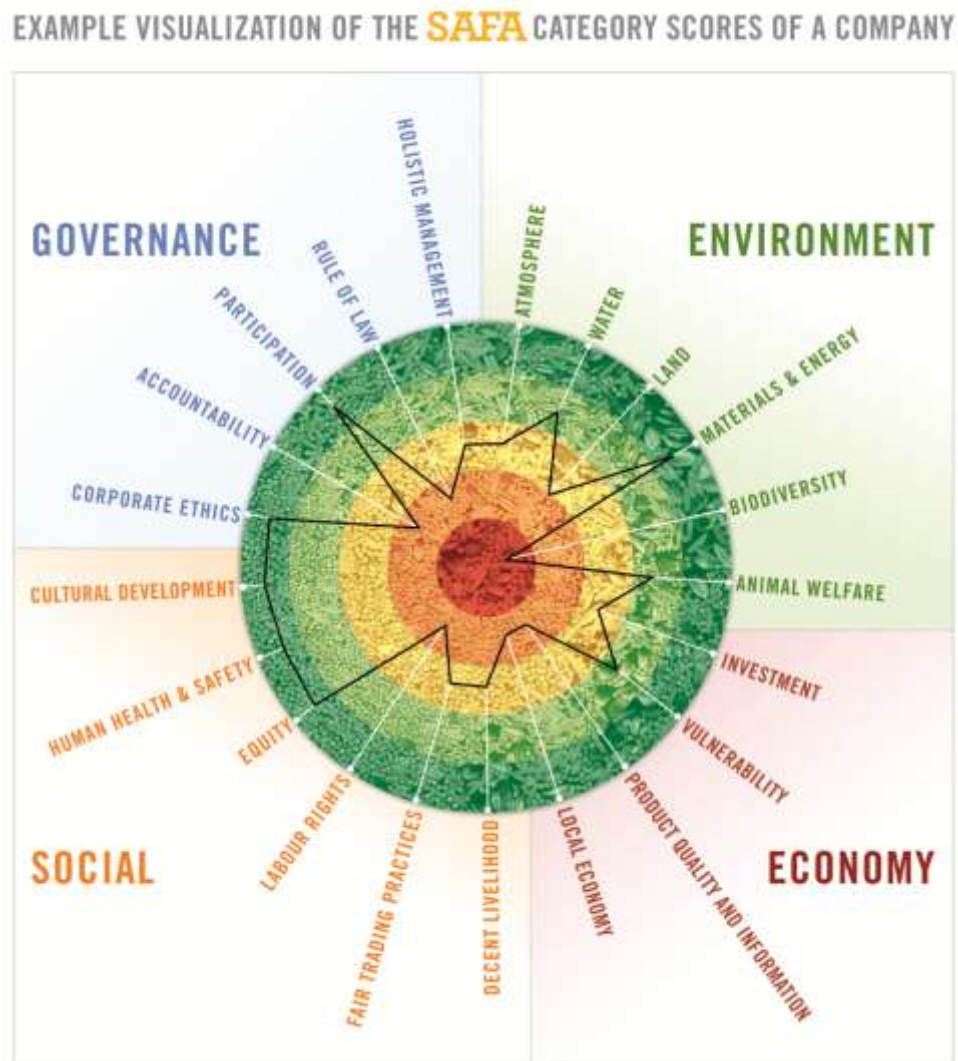
Step 4 activities consist of combining the documentation from the previous steps into a Performance Report for either internal purposes or external purposes.

Visualization

Sustainability is a complex topic and even with aggregation of the 113 indicators and 56 sub-themes, understanding all of this data can be challenging and difficult to communicate internally or externally. Trying to find related content can also be difficult and understanding the relationships in a two dimensional spreadsheet is daunting. But data visualizations can make all of that much easier, allowing you to see the concepts and relationships. Data Visualization is a method of presenting information in a graphical form as in the following example.

A possible illustration of the overall sustainability performance and sustainability gaps are provided in Figure 11. This visualization of the SAFA sustainability performance ratings is depicted in the polygon of a hypothetical enterprise. The thick black line connects theme' performance over a traffic light color code: best/good (green), needs improvement (yellow/orange) or unacceptable (red).

Figure 10: SAFA sustainability polygon



The final report

The final report is a synthesis of the SAFA including ratings (qualified with the Accuracy scores), hot spot issues are treated, irrelevant sub-themes justified and areas for improvement are identified.

Disclosure of procedure

The disclosure of procedure and methodology information should be transparent and documented regardless of intended use. Details on the selected system boundaries, indicator, thresholds, data sources, inclusion of data from other sources including assumptions and performance ratings should be included. Irrelevant sub-themes and where a boundary is narrowed, the SAFA reporting needs to be transparent on what has been left-out from the assessment and a clear documented rationale. Where evidence does not exist for material or hot spot issues, performance ratings should disclose assumptions and risks associated with the issue. The report should identify areas for improvements based on the contextualization and ratings.

The assessment accuracy depends on the data and methodology of calculation used, reflected in the Accuracy Score at sub-theme, theme and overall level. If a company wishes to communicate the SAFA report outside of internal purposes, the complete report must be shared. This includes information on the selected system boundaries, indicators, thresholds, data sources, inclusion of data from other audits, and about stakeholder relations in each SAFA process.

Critical review

A critical review fosters the quality, credibility and transparency of the assessment. The information and ratings included in a report should be supported by documentation that could be reviewed and understood by someone other than the report preparer. The review should provide all information needed for a critical appraisal by interested stakeholders. This is in line with the procedure outlines of LCA (ISO, 2009) and the G4 Guidelines (GRI, 2013), the transparency principles of the Bellagio STAMP (IISD, 2009) and the ISEAL Impacts Code (ISEAL Alliance, 2010).

Organizations can use a variety of approaches to enhance the credibility of their reports depending on the use of the results (see Table 7). In a SAFA, the critical review can be handled in different ways. For internal use, it may be sufficient to have an internal committee provide the review and feedback. Where results are designated for external use, including business to business communication, an external review is critical and recommended for credibility. Type, comprehensiveness and complexity of the review should be defined during the SAFA scoping phase.

Sharing of results

Companies undertaking a SAFA have the possibility of benefiting from the experiences of others and sharing results. This could be across supply chains or within a supply chain with different suppliers, creating valuable lessons learned. This will allow companies operating in the same region or industry sector to build learning on best practices and thresholds. Since sustainability is often considered a pre-competitive issue by the private sector, as testified by the cooperation of numerous companies in the frame of multi-stakeholder initiatives (e.g. WEF, 2010), mutual access to SAFA-related information is in the interest of participating companies.

Use of results

SAFA is intended primarily for self-evaluation and internal communication about sustainability goals and performance. It is possible to use the SAFA report for communication with other businesses to establish a common understanding of sustainability aspects.

SAFA results can be used for internal management, as well as learning and communication purposes. For credibility, it is essential that the SAFA procedures and results have a high degree of transparency. The completion of a SAFA assessment does not allow the entity to use the logo of SAFA or FAO in any way that implies endorsement or certification, as no one is verifying the claim. SAFA is not intended for Business-to-Consumer communication, as public assurance requires that certain characteristics or attributes of the product (or its production method), as laid down in specifications, be observed. SAFA does not assess products or processes – but enterprises. However, reference can be made to **“Consistency with the SAFA procedures and principles”** provided that the assessment is

made fully transparent in all its choices and customization (e.g. with regards to boundaries, data sources, indicator selection, rating, etc.).

SAFA Guidelines for claims and communications are based on, but are not limited to, the following:

- U.S. Federal Trade Commission's (FTC's) Guides for the Use of Environmental Marketing Claims;
- Canadian Competition Bureau guidance PLUS 14021 Environmental claims: A guide for industry and advertisers;
- United Kingdom's Department for Environment, Food, and Rural Affairs (DEFRA) Green Claims – Practical Guidance How to Make a Good Environmental Claim;
- Consumers Union Greener Choices;
- The European Commission's Claims Guidance 2000;
- ISO 14020 series ((14020, 14021, 14024, 14025) on Environmental labels and declarations;
- Global Reporting Initiative Reporting Principles, GRI 4.

SAFA communication principles

- Self-declared claims shall be accurate, verifiable, relevant, able to be substantiated and not misleading.
- Claims shall be based on scientific methodology that is sufficiently thorough and comprehensive to support the claim and that produces accurate and reproducible results.
- Information concerning the procedure, methodology and any criteria used to support claims shall be available and provided upon request to all interested parties.
- The formulation of claims shall take into consideration all relevant aspects of the life cycle of the goods or service, although not necessarily considering a full life-cycle analysis.

Table 7: SAFA communication claims

Level of communication	Key audience	Potential vehicles	SAFA reference
Product	Consumer	Labels on and off product	NONE
Brands	Consumer, staff, NGOs, media	CSR report, company website, media, in store marketing	NONE
Industry partners including B2B	Industry, Government, NGOs, media	CSR report, company websites, media	"Consistency with the SAFA procedures and principles" with report disclosure
Sustainability metric partners	Varies	Websites, tools, assessments	"Aligned with SAFA framework, themes and sub-themes"

If the polygon is communicated through whatever communications vehicle, the following must be shown next to the polygon: a box on boundary choice and cut-off criteria, Accuracy Score, which indicators/sub-themes were not included and a box on hotspot sub-themes and indicators. See Appendix C: SAFA Performance Report Checklist.

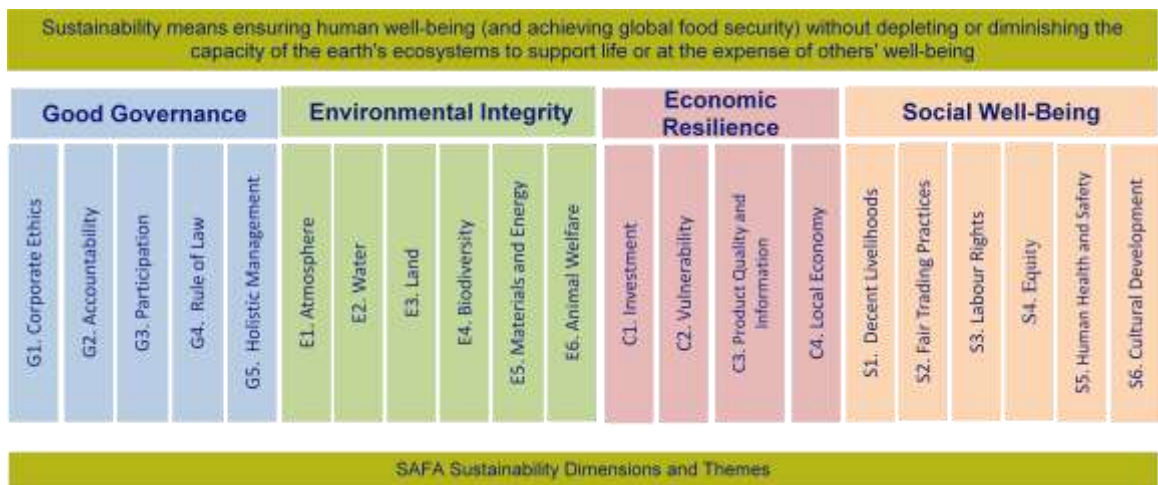
Part 3: SAFA Sustainability Components

Sustainability Dimensions Overview

The main objective of this section is to provide the background and rationale for the SAFA sustainability dimensions, themes, sub-themes and indicators. This section should be read in its entirety to understand the holistic approach of SAFA. It also serves as a reference document for implementers of SAFA who need further details to determine relevance or inclusion in their SAFA scope.

This section begins with an overview of the high level, overarching dimensions of sustainability: good governance, environmental integrity, economic resilience and social well-being. It is recognized that these dimensions are broad and encompass many aspects. There are numerous definitions depending on the context (e.g. government, corporate). For purposes of SAFA, a broad definition and aspects covered by this dimension. The scope of topics considered under each dimension is the SAFA Themes.

In the next section, each of the 21 sustainability themes are detailed including a definition for the purposes of SAFA, relevance, goals and sub-themes and indicators. Summary tables can be found in each theme section.



Sustainability dimensions



The guiding vision of SAFA is that food and agriculture systems worldwide are characterized by all four dimensions of sustainability: good governance, environmental integrity, economic resilience and social well-being. These are each explored in the following.

Good Governance

Governance is the process of making and implementing decisions (UNESCAP, 2009). For SAFA, this includes the aspects of Corporate Ethics, Accountability, Participation, Rule of Law and Holistic Management.

Dimension G: GOOD GOVERNANCE	
G1 Corporate Ethics	Mission Statement; Due Diligence
G2 Accountability	Holistic Audits; Responsibility, Transparency
G3 Participation	Stakeholder Dialogue; Grievance Procedures; Conflict Resolution
G4 Rule of Law	Legitimacy; Remedy, Restoration and Prevention; Civic Responsibility; Resource Appropriation
G5 Holistic Management	Sustainability Management Plan; Full-cost Accounting

While governance has not always been considered a separate dimension of sustainable development, the first two versions of the Commission on Sustainable Development Core Indicator Framework presented sustainability themes according to the social, environmental, economic and institutional dimensions. The weight given to governance in the SAFA Guidelines is in line with other business approaches, such as the UN Principles for Responsible Investment, the UN Global Compact (UNGC/IFC, 2009) and the GRI Guidelines (GRI, 2013).

The governance dimension of SAFA revolves around an understanding of Good Corporate Governance (GCG) that explicitly takes into account all affected stakeholders. SAFA has taken forward the governance dimension, particularly because SAFA users are concerned with value chains and stakeholder relations, in which good corporate governance is of paramount importance.

An enterprise committed to sustainable development needs a sustainability-oriented governance structure, in which content, values and responsibilities of the company are clearly stated and through which transparency and accountability are ensured. It organizes processes that facilitate an active participation of all stakeholders. Further elements include a strict orientation towards legitimacy and the rule of law and a rigorous sustainability management. A business purpose that contradicts or ignores the sustainability principle will not lead to a sustainably operating enterprise in the long run.

Environmental Integrity

To protect the integrity of Earth's ecosystems, the use of natural resources and the environmental impacts of activities must be managed such that negative environmental impacts are minimised and positive impacts fostered. In a SAFA, the following themes of environmental sustainability are addressed: Atmosphere, Water, Land, Materials and Energy, Biodiversity and Animal Welfare.

Dimension E: ENVIRONMENTAL INTEGRITY	
E1 Atmosphere	Greenhouse Gases; Air Quality
E2 Water	Water Withdrawal; Water Quality
E3 Land	Soil Quality; Land Degradation
E4 Biodiversity	Ecosystem Diversity; Species Diversity; Genetic Diversity
E5 Materials and Energy	Material Use; Energy Use; Waste Reduction and Disposal
E6 Animal Welfare	Health and Freedom from Stress

The state of the world's ecosystems was assessed in 2005 under the Millennium Ecosystem Assessment concluded: Human actions are fundamentally and to a significant extent irreversibly changing the diversity of life on Earth and the integrity of the environment. Critical ecosystem services on which development depends, including air and water purification, soil conservation, disease control, and reduced vulnerability to natural disasters such as floods, droughts and landslides are compromised. The poor are overwhelmingly located in rural areas and natural resources are their most important asset. Human activity including land conversion for agriculture leading to habitat loss, fragmentation and degradation, overexploitation of species due to hunting, fishing and trade are considered the main drivers of the pressures on environmental integrity.

The Convention on Biological Diversity (CBD) considers that a general application of an ecosystem approach will help achieve a balance of three objectives, namely conservation, sustainable use and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources. The need for an ecosystem approach applies to the whole food and agriculture sector, including fisheries and forestry. SAFA environmental themes and sub-themes were found to best reflect the main areas of concern regarding adverse human impacts and unsustainable exploitation, as well as give a comprehensive picture of environmental sustainability.

Economic Resilience

Economic activity involves the use of labour, land and capital to produce goods and services to satisfy peoples' needs (Jörisen et al., 1999). The following themes are covered by the economic dimension of SAFA: Investment; Vulnerability; Product Safety and Quality and Local Economy.

Dimension C: ECONOMIC RESILIENCE	
C1 Investment	Internal investment; Community Investment; Long-ranging Investment, Profitability
C2 Vulnerability	Stability of Supply; Stability of Market; Liquidity; Risk Management; Stability of Production
C3 Product Safety and Quality	Food safety; Food Quality, Product Information
C4 Local Economy	Value Creation; Local Procurement

This dimension of sustainability is directly linked with the fulfilment of needs, a pillar of sustainable development as defined by the World Commission on Environment and Development (WCED, 1987). Sustainability in the social and environmental domains is supported by functioning businesses. While inter-related, it is critical to assess economic sustainability as a sustainability dimension in its own right.

To be considered economically sustainable an enterprise should be capable of paying all its debts, generating a positive cash flow and adequately remunerating workers and shareholders. In addition, it should have buffer mechanisms (savings, assets) to cope with changes and shocks out of its control, for example, economic downturns, damaging weather. In essence, it must be economically resilient.

Some aspects of economic sustainability have potential tensions or tradeoffs with the other dimensions, including “sustainable growth” and “Green Economy”. Steady and adequate economic growth is a common proxy for positive socio-economic development. Economic growth is the declared goal of most nation states and was endorsed by WCED (1987) and UNEP (2011). The possibility of endless economic growth in a limited ecosphere has been contested by many, and even dismissed as an oxymoron (Daly, 1990). Increasingly, the goal of decoupling economic growth from the use of limited natural resources is becoming popular (UNEP, 2011).

The SAFA Guidelines forego the macro-economic issue of growth rates in favour of a micro-economic approach that focuses on the enterprise and the local community resilience.

Social Well Being

Social sustainability is about the satisfaction of basic human needs and the provision of the right and the freedom to satisfy one’s aspirations for a better life (WCED, 1987). This applies as long as the fulfilment of one’s needs does not compromise the ability of others or of future generations to do the same (sustainable). In SAFA, social sustainability is assessed by looking at the theme categories of Decent Livelihood; Fair Trading Practices; Labour Rights; Equity; Human Health and Safety and Cultural Development.

Dimension S: SOCIAL WELL-BEING	
S1 Decent Livelihood	Right to Quality of Life, Capacity Building; Rights of Fair Access to Land and Means of Production
S2 Fair Trading Practices	Responsible Buyers
S3 Labour Rights	Employment Relations; Forced Labour; Child Labour; Employee's Freedom of Association and Right to Bargaining
S4 Equity	Non-discrimination; Gender Equality; Support to Vulnerable People
S5 Human Health and Safety	Workplace Safety and Health Provisions for Employees; Public Health
S6 Cultural Development	Indigenous Knowledge; Food Sovereignty

Basic human needs and rights are defined in the International Bill of Human Rights, which consists of the Universal Declaration of Human Rights (UN, 1948), the International Covenant on Civil and Political Rights (UN, 1966a) and the International Covenant on Economic, Social and Cultural Rights (UN, 1966b). For the food and agriculture sector, Human Rights are translated into the Right to Adequate Food (FAO, 2004). Human Rights are further specified for work environments in the Declaration of Fundamental Principles and Rights at Work (ILO, 1998).

Guidance on how to protect and respect human rights in business operations is provided by the “UN Protect, respect and remedy framework for Business and Human Rights”. Business enterprises are responsible of respecting human rights, both in their own business activities and where human rights impacts are “directly linked to their operations, products and services by their business relationships” (UNHRC, 2011).

International norms and certification standards widely integrate the concepts and principles of these conventions and declarations. In SAFA, the contribution of the assessed entity to the fulfilment of human needs is at the centre of the social sustainability dimension. Social sustainability is broken

down to the categories of decent livelihood, labour rights, equity, human health and safety and cultural diversity.

Sustainability Theme protocols

The sustainability theme protocols provide detailed guidance for each of the twenty SAFA sustainability themes. Each protocol includes examples of suitable indicators to determine sustainability performance for the sub-themes.

Outline of SAFA sustainability theme protocols

1. **Definition** of the theme as assessed in SAFA. During the consultation phase, numerous definitions and connotations were identified depending on context, purpose and use of the theme. Focusing on the SAFA vision and purpose, a basic definition is proposed for orientation, but not necessarily definitive.
2. **Relevance** of the Subject: importance of the theme to sustainable development, sustainable food and agriculture.
3. **Theme Sustainability Goals**: translation of societal and higher-level goals to one operational goal in the food and agriculture sector.
4. Sub-themes **Core Indicators and type**. Tabular overview of theme, sub-theme and core indicators. The objectives of the sub-themes for further clarification are provided.

SAFA GOVERNANCE DIMENSION

THEMES, SUB-THEMES, LIST OF CORE INDICATORS

Theme G1 – Corporate Ethics

Definition of Theme

Corporate ethics in SAFA refers to the sustainability principle being embedded in the fabric of the whole enterprise.

In SAFA, the sub-themes covered included are Mission Statement and Due Diligence.

Relevance of Theme to Sustainability

Good governance includes the formulation of a statement that goes beyond profit to embrace ethics and sustainability and based on a vision of a sustainable future that is attractive to all stakeholders (Maak & Ulrich, 2007). A good governance structure is the foundation of a successful, sustainability- and integrity-oriented enterprise culture (Loew & Braun, 2006; Erwin, 2010). The mission statement should state, credible, clear and authentic words, how the enterprise intends to contribute to sustainable development. For smallholders who may be illiterate or just too overworked to write things down, a written statement is not feasible. However, illiterate farmers may have strong and clear missions based on deeply held values and as members of a community of shared values. It is important to acknowledge this kind of mission statement along with the more formal statements one expects from a larger farm or enterprise – especially because in practice, the small farm may have reached a higher level of agro-ecological sustainability and continual improvement than the bigger enterprise. For the operational level, principles are defined through a Code of Conduct (CoC) (Maak & Ulrich, 2007). The CoC provides clear guidance in concrete situations, is authoritative, without limiting scopes of action too much, and fosters desirable behavior. It provides management guidance and priorities for decision making in situations where trade-offs between the dimensions of sustainable development are encountered.

Enterprises in the agriculture and food sector have a wide range of governance structures, from a virtual absence of governance to highly sophisticated systems. Governance is also expressed and practiced differently in different cultures. Traditional and chiefly cultures use forms which do not fit current western definitions but which nevertheless can be shown to be effective in managing sustainable development. Size and market power of enterprises in the same sector, region or value chain are equally variable. This often results in major imbalances and disadvantages, particularly where small enterprises depend on large firms that are better organized, but lack a business purpose going beyond profit. Larger size implies a larger sphere of impact and influence and thus also of responsibility. Therefore, large, well-organized enterprises should contribute to the improvement of market structures and to the sustainability of production of their suppliers, rather than capitalizing on their weakness. In small enterprises typical of agriculture and fisheries, operating culture depends on the personal integrity and values of the entrepreneur, who is personally liable and responsible for the enterprise. Due diligence procedures can help anticipate and prevent negative impacts on environment and people, and thus protect the enterprise's image. The SAFA goals on governance structure are relevant insofar as they inspire reflections on values and principles.

G 1 CORPORATE ETHICS		
Theme Goal: The enterprise has explicit, publicly available sustainability objectives and effective means of implementation and verification, as well as of identification and proactive addressing of major sustainability challenges.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
G 1.1 Mission Statement	The enterprise has made its commitment to all areas of sustainability clear to the public, to all personnel, and other stakeholders through publishing a mission statement or other similar declaration (such as a code of conduct or vision statement) that is binding for management and employees.	G 1.1.1 Mission explicitness Is the mission of the enterprise articulated in all enterprise reporting and understood by all staff?
		G 1.1.2 Mission driven Is the enterprises' mission evident in codes and policies, and can the governance body demonstrate the impact of its mission on developing policy and practice?
G 1.2 Due Diligence	The enterprise is pro-active in considering its external impacts before making decisions that have long-term impacts for any area of sustainability. This is accomplished by the enterprise following appropriate procedures such as risk assessments, and others that ensure that stakeholders are informed, engaged and respected.	G 1.2.1 Due diligence Does the enterprise have a clear policy for impact assessment, appropriate tools for assessment and is it able to show that these are being used to inform decisions which will have long term impacts on area of sustainability?

Theme G2 – Accountability

Definition of Theme

In SAFA, accountability is disclosure of credible information about strategy, goals, performance to those who base their actions and decisions on this information.

In SAFA, the sub-themes covered include Holistic Audits; Responsibility; and Transparency.

Relevance of Theme to Sustainability

Shareholders, contractors, consumers, communities and other stakeholders may have to take decisions based on information disclosed by the enterprise. Accountability includes aspects to ensure such information is complete, correct and accessible. The accountability concept is enhanced in SAFA to cover the disclosure of information about financial, environmental and social performance (the dimensions of the “triple bottom line” approach) and, where possible and relevant, its governance performance. This theme further integrates the implementation of due diligence procedures, as these go beyond the reporting of activities and performance.

The success of an enterprise can be affected by the stakeholders’ view of its credibility, transparency and performance. Perceptions of an enterprise’s integrity and accountability are affected by how performance with respect to the economic, environmental and social dimensions of sustainability is communicated. Consumers as well may prefer products of respectable companies, and shareholders and investors increasingly tend to put their money in operations of which they are convinced that all potential risks are thoroughly managed (G100, 2003).

There is increased awareness that an active and holistic management of accountability, Holistic reporting requires the collection, evaluation and comprehensive compilation of performance data.

The agriculture and food sector is at the nexus of the biosphere and the human economy and can thus be considered a custodian of land, crops, animals and other resources. Its products are directly used or consumed by everybody. This causes a high sensitivity of the public to actions and developments in this sector that impact on people and environment. Transparency and credibility are important success factors in food and agriculture sector and SAFA addresses the account-giving relationship.

G 2 ACCOUNTABILITY		
Theme Goal: The enterprise assumes full responsibility for its business behavior and regularly, transparently and publicly reports on its sustainability performance.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
G 2.1 Holistic Audits	All areas of sustainability in the SAFA dimensions that pertain to the enterprise are monitored internally in an appropriate manner, and wherever possible are reviewed according to recognized sustainability reporting systems.	G 2.1.1 Holistic audits Does the enterprise use an internationally recognized framework for sustainability reporting such as the Global Reporting Initiative, or is social auditing being used in the enterprise?
G 2.2 Responsibility	Senior management and/or owners of enterprise regularly and explicitly evaluate the enterprise's performance against its mission or code of conduct, (as stated in G 1.1).	G 2.2.1 Responsibility Can the enterprise show, through governance papers or internal dialogue, that performance against mission is regularly evaluated with appropriate stakeholder input?
G 2.3 Transparency	All procedures, policies, decisions or decision-making processes are accessible where appropriate publicly, and made available to stakeholders including personnel and others affected by the enterprise's activities.	G 2.3.1 Transparency Does the enterprise have a policy which requires management to report on how policies, procedures, decisions and decision making processes are made accessible to stakeholders?

Theme G3 – Participation

Definition of Theme

Participation refers to the need for outreach to, and ensuring the potential for involvement of, interested parties, in particular those who are materially affected. This includes the ability to actively take part in decision-making.

In SAFA, the sub-themes covered are Stakeholder Dialogue; Grievance Procedures and Conflict Resolution.

Relevance of Theme to Sustainability

In the context of SAFA, participation denotes stakeholder participation in the widest sense. As with the issue of sustainable development, many different stakeholders may be affected by the enterprises decisions and activities.

A stakeholder is any group or individual who can affect, or is affected by, the actions of the enterprise (Freeman, 1984). One needs to distinguish powerful stakeholders who "can affect" from stakeholders with little or no influence who "are affected by" decisions. Particularly concerning the second group, a wide interpretation of the term "stakeholder" should be followed, covering local communities, consumers, farmers and fishers, future generations and the living environment.

Where there is a large imbalance e.g. of market power between stakeholders, the weaker side should be empowered such that it can effectively participate in the dialogue. If a misuse of power occurs or stakeholders are harmed by actions of an enterprise, adequate grievance procedures must be in place to ensure that remedy and restoration provided (see "Rule of law").

The agriculture and food sector is one of the largest sectors in terms of the number of people working in, dependent upon and affected by it. While identifying, informing and empowering stakeholders is highly relevant, also due to the importance of transparency and credibility in food chains (see "Accountability"), it is also a major challenge. Enterprises in the value chain will have to cooperate with each other to ensure correct and comprehensive stakeholder information and participation. This offers the advantage of enhanced transparency of the chain and of improved, systematic knowledge of the chain(s) of which the enterprise forms part. Even in smallholdings, at the level of rural households and among producers, participation is essential to share knowledge and take fair decisions regarding the use of family or community resources (see "Equity").

G 3 PARTICIPATION		
Theme Goal: All stakeholders substantially affected by the enterprise's activities are identified, empowered and invited to share decision-making on activities impacting their lives and having major environmental impacts.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
G 3.1 Stakeholder Dialogue	The enterprise pro-actively identifies stakeholders, which include all those affected by the activities of the enterprise (including any stakeholders unable to claim their rights), and ensures that all are informed, engaged in critical decision making, and that their input is duly considered.	G 3.1.1 Stakeholder identification Can the enterprise identify all material stakeholders and describe the process by which they were identified?
		G 3.1.2 Stakeholder engagement Does the enterprise use appropriate mechanisms to engage with each group of stakeholders?
		G 3.1.3 Engagement barriers Is the enterprise aware of, and addresses barriers to participation for less powerful stakeholders?
		G 3.1.4 Effective participation Can the enterprise describe actual stakeholder participation (including of "least-powerful" stakeholders), its impact on their decision making and how this impact was communicated to stakeholders?
G 3.2 Grievance Procedures	All stakeholders (including as stated above, those who cannot claim their rights, personnel, and any stakeholders in or outside of the enterprise) have access to appropriate grievance procedures without a risk of negative consequences.	G 3.2.1 Grievance procedures Can the enterprise describe grievance procedures for each stakeholder group, how they are publicized (especially with "least powerful" stakeholders) and their current usage?
G 3.3 Conflict Resolution	Conflicts of stakeholder interests with the enterprise's activities are resolved through collaborative dialogue (e.g. arbitrated, mediated, facilitated, conciliated or negotiated), based on respect, mutual understanding and equal power.	G 3.3.1 Conflict resolution Can the enterprise identify potential conflicts of interest with and among various stakeholder groups, and provide examples of resolution through collaborative dialogue, based on respect, mutual understanding and equal power?

Theme G4 – Rule of Law

Definition of Theme

The United Nations defines the Rule of Law as a principle of governance by which all persons and entities are “accountable to laws that are publicly promulgated, equally enforced and independently adjudicated”. In the simplest terms, it is compliance with legislation. In SAFA, the Rule of Law is considered in a business context, its main central aim being the protection of the individual and group rights of all (Ehm, 2010). In SAFA the sub-themes covered include: Legitimacy; Remedy, Restoration and Prevention; Civic Responsibility and Resource Appropriation.

Relevance of Theme to Sustainability

The rule of law (ROL) is a concept important to modern legal systems and international agreements. These laws have to be consistent with international human rights standards (UN, 2004). Among the key elements then is accountability before the law, legal certainty and legal transparency.

An enterprise committed to the ROL will only conduct business that can be considered legitimate in the light of the moral rights of all humans, as expressed e.g. in the Universal Declaration of Human Rights (UN, 1948). Businesses must respect and avoid being complicit in human rights violations by the state, even if they are formally legal under applicable national law. Enterprises with a large sphere of influence and impact should not only respect the ROL in their own operations, but require business partners to do the same.

In the context of agriculture, there are several important elements: (i) equitable access to and legal certainty over natural resources on which agriculture depends, (ii) stakeholder participation in decisions affecting natural resource use and access, (iii) the presence of complaints and disputes mechanisms to monitor, enforce and ensure access to justice and (iv) the legal empowerment of stakeholders.

Enterprises in food and agriculture operate in a variability of legal frameworks, with different degrees of legal certainty and recognition of a universal ROL. Where states and judiciaries are weak, unclear or illegitimate situations can evolve, for example concerning ownership of and access to land, clean water and other resources. This applies in particular to remote rural regions, where law enforcement tends to be particularly difficult. Major imbalances between market players (see “Corporate Ethics”) can further contribute to situations where “might makes right”.

Enterprises in the food supply chain can be very large and powerful dwarfing even nation states and yet operate in highly competitive environments where there exists constant pressure to reduce costs. Some enterprises become involved in changing the regulatory environment within which they operate. In the case of organizations with strong commitment to sustainability values, enterprises may strive to promote or enhance the impact of regulatory or even voluntary codes such as fair trade and seek to strengthen these. Others are involved in trying to weaken and reduce coverage, or limit sanctions. And others through organized lobby groups have sought to directly gain advantage over other stakeholders through for instance, removing or lowering minimum wage regulations.

G 4 RULE OF LAW		
Theme Goal: The enterprise is uncompromisingly committed to fairness, legitimacy and protection of the Rule of Law, including the explicit rejection of extortion, corruption and of the use of resources that are under legal dispute, whose use contradicts international agreements or which is considered illegitimate by affected stakeholders. Moreover enterprises will proactively work to improve the protections offered to the environment, vulnerable workers and communities by seeking to strengthen applicable laws and codes in concert with affected stakeholders.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
G 4.1 Legitimacy	The enterprise is compliant with all applicable laws, regulations, and standards voluntarily entered into by the enterprise (unless as part of an explicit campaign of non-violent civil disobedience or protest as specified in G 4.3), and international human rights standards (whether legally obligated or not).	G 4.1.1 Legitimacy Does the enterprise's policy explicitly demand that all applicable laws and regulations, voluntary standards, adopted or existing, are reported to the governance body and regularly reviewed for compliance and congruence with mission?
G 4.2 Remedy, Restoration and Prevention	In case of any legal infringements or any other identified breach of legal, regulatory, international human rights, or voluntary standard, the enterprise immediately puts in place an effective remedy and adequate actions for restoration and further prevention are taken.	G 4.2.1 Remedy, restoration and prevention Can the enterprise show evidence of a prompt and responsible response to legal, regulatory, international human rights and voluntary code breaches, including detailed response on how the breach was remedied, how the effects of the breach will be restored or compensated and the policies and processes instituted to prevent further breaches?
G 4.3 Civic Responsibility	Within its sphere of influence, the enterprise supports the improvement of the legal and regulatory framework on all dimensions of sustainability and does not seek to avoid the impact of human rights or sustainability standards or regulation through the corporate veil, relocation, or any other means.	G 4.3.1 Civic responsibility Within its sphere of influence, does the enterprise proactively and transparently support the improvement of the legal and regulatory framework on all four dimensions of sustainability, and does it not seek to avoid the impact of human rights or sustainability standards or regulation through the corporate veil, relocation, or any other means?
G 4.4 Resource Appropriation	Enterprises do not reduce the existing rights of communities to land, water and resources and operations are carried after informing affected communities by providing information, independent advice and building capacity to self-organize for the purposes of representation.	G 4.4.1 Free, prior and informed consent Is the enterprise aware of stakeholders' pre-existing access to land, water and resources, has it mapped this to the satisfaction of all affected stakeholders and agreed to take no action to reduce this access until it has fully informed stakeholders, negotiated on equal terms and provided for mutually agreeable compensation, sufficient to allow sustainable livelihoods?
		G 4.4.2 Tenure rights Is the enterprise aware of stakeholders' pre-existing access to land, water and resources, and can the enterprise prove that it has fully and promptly cooperated with any inquiry and remedy process to the satisfaction of affected parties in case of any (alleged) breach of tender rights.

Theme G5 – Holistic Management

Definition of Theme

In SAFA, holistic management (often termed sustainability management) is understood as management that aims at the continuous improvement of environmental integrity, economic resilience, social well-being and good governance, with the ultimate goal of operations being fully in line with a sustainable development of society.

In SAFA sub-themes include Sustainability Management plan and Full-cost Accounting.

Relevance of Theme to Sustainability

The topic of holistic management is a relatively new one and thus not treated in detail by international agreements or recommendations. Some international sustainability reporting standards are aligned or have equivalencies with international norms and reference documents, for example the Global Reporting Initiative.

In business, a successful management of sustainability performance is achieved if the management of environmental, social and governance issues is in line with increased competitiveness and economic performance. The triple bottom line or the triangle of “people, planet and profit” is frequently used to illustrate this. One particular challenge to sustainability management is finding appropriate ways of dealing with trade-offs between sustainability goals. Holistic management is about striking a balance between short- and long-term interests, economic, social and environmental concerns, stakeholders and shareholders. An appropriate Code of Conduct (see “Governance structure”) provides guidance on how to deal with trade-offs.

Enterprises operating in the food and agriculture sector can have effects external to their business on the environment (e.g. air pollution), social (e.g. training of young people) and economic (e.g. added tax basis with local service providers). In historical accounting, these external effects are neither accounted for nor considered in economic decisions. So enterprises are neither rewarded for positive impacts, or have to pay for negative impacts. More recently, it is recognized that the consideration of such external effects in decision-making and accounting is a cornerstone of sustainable development. Full cost accounting is an integral part of holistic management that is particularly important in the agricultural sector, where production intensively interacts with the natural environment. However, there still is a lack of adequate methods for operationalizing full-cost accounting.

G 5 HOLISTIC MANAGEMENT		
Theme Goal: Production and procurement are managed, and accounting is done, with equal consideration of all dimensions of sustainability and of the trade-offs and synergies linking them.		
Sub-theme	Sub-theme objective	Sub-theme core indicators
G 5.1 Sustainability Management Plan	A sustainability plan for the enterprise is developed which provides a holistic view of sustainability and considers synergies and trade-offs between dimensions, including each of the environmental, economic, social and governance dimensions.	G 5.1.1 Sustainability management plan Does the enterprise have a formal, governance body endorsed, sustainability plan for the enterprise which provides a holistic view of sustainability which covers each of the environmental, economic, social and governance dimensions, including in the plan references to mission and demonstration of progress against the plan, or how the plan has driven specific decisions and their outcomes?
G 5.2 Full-cost Accounting	The business success of the enterprise is measured and reported taking into account direct and indirect impacts on the economy, society and physical environment (e.g. triple bottom line reporting), and the accounting process makes transparent both direct and indirect subsidies received, as well as direct and indirect costs externalized.	G 5.2.1 Full-cost accounting Is the business success of the enterprise measured and reported to stakeholders taking into account direct and indirect impacts on the economy, society and physical environment?

SAFA ENVIRONMENTAL DIMENSION

THEMES, SUB-THEMES, LIST OF CORE INDICATORS

Theme E1 – Atmosphere

Definition of Theme

Atmosphere in SAFA refers to the integrity and preservation of clean air. Priority atmospheric issues include climate change, stratospheric ozone depletion, acidification and eutrophication, urban air quality and tropospheric ozone. Agricultural activities and the food sector are strongly affected by climate change, and at the same time they are major contributors to it. These sectors also release air pollutants such as particulate matter, sulphur dioxide, nitrous oxides, volatile organic compounds and ground-level ozone.

In SAFA, the sub-themes covered are Greenhouse Gases and Air Quality.

Relevance of Theme to Sustainability

Priority atmospheric issues include climate change, ozone depletion, acidification and eutrophication, urban air quality and tropospheric ozone. Their impact relates to human health, biodiversity, health of ecosystems, economic damage and global security.

Global warming refers to the rising of average surface temperature, expected as a result of greenhouse gas (GHG) emissions into the atmosphere from human activity. Many of the effects are long-term, global in nature and irreversible, with consequences for future generations.

Agriculture is strongly affected by global warming, as changes in temperature and rainfall patterns and dramatic weather events can impair agricultural activities. Those most vulnerable, rural small holders, women and the poor are predicted to be the most affected, particularly in poor developing regions where people are already vulnerable to food insecurity.

Agriculture activities and the food sector also are major contributors to atmospheric changes from livestock, fertilizers and energy use. Some 20 to 30% of global GHG emissions can be associated with food, while crop and livestock production alone account for 10 to 15 % of global GHG emissions (Bellarby, 2008; EC, 2010). Indirect but significant emissions drivers are the agriculture-driven land use changes.

The resulting decrease of the protective ozone layer causes increased ultraviolet radiation at the earth surface that can damage human health. Terrestrial and marine ecosystems are negatively affected e.g. through reduced photosynthesis.

E 1 ATMOSPHERE			
Theme Goal: The enterprise's actions contain greenhouse gases to the extent possible and do not release quantities of ozone-depleting substances and air pollutants that would be detrimental to the health of ecosystems, plants, animals or humans.			
Sub-theme	Sub-theme objective	Sub-theme core indicators	Type of Indicator (target, practice, performance)
E 1.1 Greenhouse Gases	The emission of GHG is contained.	E 1.1.1 GHG reduction target Have you set a target in reducing GHG emissions?	Target
		E 1.1.2 GHG mitigation practices Which activities and practices have you implemented that have effectively reduced your GHG emissions?	Practice
		E 1.1.3 GHG balance What is the net direct GHG emission (i.e. annual emissions minus sequestration) of your enterprise?	Performance
E 1.2 Air Quality	The emission of air pollutants is prevented and ozone depleting substances are eliminated.	E 1.2.1 Air pollution reduction target Have you set a target in reducing the emission of air pollutants?	Target
		E 1.2.2 Air pollution prevention practices Which activities and practices have you implemented that have effectively reduced your air pollutants?	Practice
		E 1.2.3 Ambient concentration of air pollutants What is the percentage of days of the year when standard air pollution values have been exceeded in the surroundings of the enterprise?	Performance

Theme E2 – Water

Definition of Theme

Fresh water is naturally occurring water on the Earth's surface in ice sheets, ice caps, glaciers, bogs, ponds, lakes, rivers and streams, and underground as groundwater in aquifers and underground streams.

In SAFA, the sub-themes covered are Water Withdrawal and Water Quality.

Relevance of Theme to Sustainability

Approximately 50 countries are currently facing moderate or severe water stress and the number of people suffering from year-round or seasonal water shortages is expected to increase as a result of climate change. One of the main limiting factors of food production to feed our growing populations is water. Agriculture is the single largest user of freshwater on a global basis using a global average of 70% of all surface water supplies according. Water consumption is growing at twice the speed of population growth. Water security is one of the biggest issues driving management decisions according to a recent A.D. Little report “Water Margin”.

Global issues of health, poverty, deforestation, desertification and land use change are all directly associated with water resources and their management.

Freshwater quality is as important as sufficient water quantities. The increase of urbanized areas and the compaction of arable soils by heavy machinery reduces soil infiltration capacity, resulting in surface runoff, soil erosion and floods. About 20% of the world's irrigated land is salt-affected, and salt water intrusion is of particular concern to arid and semi-arid regions and small island states. Inappropriate agricultural water use can pollute waterways or cause secondary soil salinization and particularly is affecting areas already affected by land and water scarcity (FAO, 2011). 70% of the pesticide pollution in surface waters is estimated to originate from agriculture.

Even as demand for water by all users grows, groundwater is being depleted, other water ecosystems are becoming polluted and degraded, and developing new sources of water is getting more costly. Water quality and availability are hitting the world's poorest the hardest. Water plays a pivotal role for sustainable development, including poverty reduction. The use and abuse of and competition for increasingly precious water resources have intensified dramatically over the past decades, reaching a point where water shortages, water quality degradation and aquatic ecosystem destruction are seriously affecting prospects for economic and social development, political stability, as well as ecosystem integrity.

E 2 WATER			
Theme Goal: Freshwater withdrawal and use do not hinder the functioning of natural water cycles, nor contribute to water pollution that would impair the health of humans, plants and animal communities.			
Sub-theme	Sub-theme objective	Sub-theme core indicators	Type of Indicator (target, practice, performance)
E 2.1 Water Withdrawal	Withdrawal of ground and surface water and/or use does not impair the functioning of natural water cycles and ecosystems and human, plant and animal communities.	E 2.1.1 Water conservation target Have you set a target for reducing water consumption or water withdrawals?	Target
		E 2.1.2 Water conservation practices Which activities and practices have you implemented that have effectively increased the efficiency, or reduced the amount of, the freshwater used in your operation?	Practice
		E 2.1.3 Ground and surface water withdrawals What is the share of your annual withdrawals of ground and surface water as a percentage of total renewable water?	Performance
E 2.2 Water Quality	The release of water pollutants is prevented and freshwater quality is restored.	E 2.2.1 Clean water target Have you set a target for improving the quality of the water affected by your operations?	Target
		E 2.2.2 Water pollution prevention practices Which activities and practices have you implemented that have effectively reduced or prevented the release of water pollutants?	Practice
		E 2.2.3 Concentration of water pollutants What is the percentage of days of the year when standard water pollution values have been exceeded in water (groundwater, surface water, coastal and marine water) affected by your operations?	Performance
		E 2.2.4 Wastewater quality What is the share of wastewater with a good water quality (concentrations of faecal coliforms, heavy metals, BOD and COD below critical levels) as a percentage of the total wastewater from your operations?	Performance Quantitative

Theme E3 - Land

Definition of Theme

The part of the Earth not covered by water is land and for the purposes of SAFA are essentially the soil resources. In SAFA the sub-themes covered include Soil Quality and Land Degradation.

Relevance of Theme to Sustainability

Humans use soils to grow food and fodder crops, renewable raw materials and energy. Soils provide ecosystem services including water purification, nutrient cycling, carbon storage and buffer, filter and habitat functions. Yet, land and soil are finite resources.

Soil conservation is set of management strategies for prevention of soil being eroded from the earth's surface or becoming unhealthy from overuse, over irrigation, acidification, or other chemical soil contamination. Agriculture and forestry play a pivotal role in sustainable land use, occupying two thirds of terrestrial surface. Natural fertile soils can hardly be increased, but can easily be destroyed (World Soil Charter, 1981). Given the limited availability of original fertile soils, more than 80% of the required growth of agricultural production until 2050 will have to come from yield enhancement on currently cultivated soils (FAO, 2011). Due to expanding human requirements, fertile land, suitable for primary production of biomass, is a scarce resource. The magnitude of land cover change threatens the stability and resilience of ecosystems, including through its impacts on global warming.

Soil cover is important to prevent erosion, loss of nutrients (reduces productivity), efficient use of water, soil and chemical run off resulting in reduced water quality and desertification. Soil carbon, related to its organic content, is widely accepted as a major factor in its overall health. There exists also the potential of soil as a carbon sink or offset for climate change. Soils are highly complex ecosystems and the single most important production factors for human nutrition. Maintaining and rehabilitating soil health is an absolute imperative. Approximately 40% of agriculture lands are considered degraded due to poor practices including unsuitable land allocation, inappropriate farming and grazing practices and lack or misuse of appropriate technologies. The most important processes (in terms of area) are water erosion, wind erosion, salinization, compaction and chemical pollution (Oldeman et al., 1991; MEA, 2005). Desertification was identified as one of the greatest challenges to sustainable development during the Earth Summit in 1992.

E3 LAND			
Theme Goal: No land is lost due to surface sealing or mismanagement of arable lands and pastures, and soil fertility is preserved and enhanced.			
Sub-theme	Sub-theme objective	Sub-theme core indicators	Type of Indicator (target, practice, performance)
E 3.1 Soil Quality	Soil characteristics provide the best conditions for plant growth and soil health, while chemical and biological soil contamination is prevented.	E 3.1.1 Soil- improvement practices What activities and practices have you implemented that have effectively increased the quality and fertility of your soils?	Practice
		E 3.1.2 Soil physical structure On what share of the utilized land are the conditions of soil physical structure good in consideration of the local climate and bedrock?	Performance
		E 3.1.3 Soil chemical quality On what share of the utilized land is the chemical quality (e.g. synthetic compounds, highly hazardous pesticides) of soil high in consideration of the local climate and bedrock?	Performance
		E 3.1.4 Soil biological quality On what share of the utilized land is the biological quality of soil high in consideration of the local climate and bedrock?	Performance
		E 3.1.5 Soil organic matter content On what share of the utilized land are content and quality of soil organic matter high in consideration of the local climate and bedrock?	Performance
E 3.2 Land Degradation	No land is lost through soil degradation and desertification and degraded land is rehabilitated.	E 3.2.1 Land conservation and rehabilitation plan Do you have a plan which describes the steps of conserving or enhancing soil health and rehabilitating degraded soils?	Target
		E 3.2.2 Land conservation and rehabilitation practices Which effective soil conservation techniques and/or rehabilitation measures have you implemented and/or regularly practice in your operation?	Practice
		E 3.2.3 Net loss/gain of productive land What is the ratio between rehabilitated land and degraded land in your operations?	Performance

Theme E4 - Biodiversity

Definition of Theme

Biodiversity is the diversity of ecosystems, of species in these ecosystems and of the genome within these species. Agricultural biodiversity encompasses the variety and variability of animals, plants and microorganisms which are necessary to sustain the functions of the agro-ecosystem, its structure and processes for, and in support of, food security.

In SAFA, Biodiversity sub-themes are Ecosystem Diversity; Species Diversity; and Genetic Diversity.

Relevance of Theme to Sustainability

The protection of biodiversity is essential for humankind, not only because we utilize a great diversity of species but also because healthy ecosystems provide vital services like pollination, pest management, filter functions of soils and the regulation of nutrient cycles. In 1997, the global economic value of ecosystem services was estimated at USD 16 to 54 trillion (Costanza et al., 1997); global GDP then was USD 18 trillion. Measures for the protection of biodiversity and ecosystems pay off, return on investment being estimated to exceed cost by a factor of 10 to 100 (TEEB, 2009). However because the services and costs for impacting them are externalized (see Holistic Management), there has been limited market incentives for the protection of biodiversity.

Human activity is altering ecosystems at unprecedented scales and intensity. Biodiversity is adversely affected by pollution, land degradation, habitat fragmentation and loss, introduction of exotic species, climate change and natural disasters. The overuse of fish resources endangers livelihoods, especially for small-scale fishers in developing countries (FAO, 2010b). The situation in forestry is alarming, too. Net forest area declines by 5.2 million hectares per year (FAO, 2010c). The production of genetically modified crops over large areas is increasingly associated with resistance by weeds to glyphosate (UNEP, 2011), thus compromising the resilience of GM-based production systems. Agriculture, forestry and fisheries dispose of powerful levers to influence biodiversity, such as the allocation of areas to different uses, the choice of species, varieties and breeds, fertilization, harvesting etc. In agricultural landscapes, biodiversity depends on the landscape's richness in biological structures and on the intensity of farming.

E 4 BIODIVERSITY			
Theme Goal: The areas under agriculture, forestry and fisheries are managed sustainably, ensuring conservation of all forms of biodiversity.			
Sub-theme	Sub-theme objective	Sub-theme core indicators	Type of Indicator (target, practice, performance)
E 4.1 Ecosystem Diversity	The diversity, functional integrity and connectivity of natural, semi-natural and agrifood ecosystems are conserved and improved.	E 4.1.1. Landscape/marine habitat conservation plan Do you have a plan that describes how to conserve or rehabilitate a diversity of habitats within your sphere of influence?	Target
		E 4.1.2 Ecosystem-enhancing practices What activities and practices have you implemented that have effectively enhanced the functioning of ecosystem services, as well as the connectivity of ecosystems?	Practice
		E 4.1.3 Structural diversity of ecosystems What share of utilized area do you have a high structural diversity of habitats?	Performance
		E 4.1.4 Ecosystem connectivity What share of the natural and semi-natural ecosystems in your operation are connected with similar ecosystems (within and adjacent to your operation's borders) in a way that allows an exchange between populations of key species?	Performance
		E 4.1.5 Land–use and land-cover change Were any primary habitats (e.g. wetlands, primary forests, grasslands, protected waterways) converted during the last 20 years by your operations, as well as in areas where your inputs are sourced?	Perform.
E 4.2 Species Diversity	The diversity of wild species living in natural and semi-natural ecosystems, as well as the diversity of domesticated species living in agricultural, forestry and fisheries ecosystems is conserved	E 4.2.1 Species conservation target Have you set a target for the conservation and rehabilitation of the populations of rare and endemic species in your sphere of influence?	Target Yes/No/Partial
		E 4.2.2 Species conservation practices What activities and practices have you implemented to protect and rehabilitate the integrity of populations of wild plants and animals in your sphere of influence?	Practice List of Best and Unacceptable

	and improved.	E 4.2.3 Diversity and abundance of key species Have the diversity and abundance of threatened or vulnerable wild species on the one hand, and invasive species on the other, increased in your operation? If so, by what share?	Performance
		E 4.2.4 Diversity of production On what share of the utilized area do you have a diverse crop rotation and/or use several species at the same time?	Performance
E 4.3 Genetic Diversity	The diversity of populations of wild species, as well as the diversity of varieties, cultivars and breeds of domesticated species, is conserved and improved.	E 4.3.1 Wild genetic diversity enhancing practices What activities and practices have you implemented that have effectively helped to conserve or rehabilitate the genetic diversity of wild species in your operation?	Practice
		E 4.3.2 Agro-biodiversity <i>in-situ</i> conservation For each species, what is the share of production from others than the most common genetic lineage/breed?	Performance
		E 4.3.3 Locally adapted varieties/breeds What is the share of production accounted for by locally adapted varieties/breeds and by rare and traditional (heirloom) varieties and breeds?	Performance
		E 4.3.4 Genetic diversity in wild species In what share of your operations is there a high genetic diversity in non-utilized plants, animals and microorganisms?	Performance
		E 4.3.5 Saving of seeds and breeds Does your operation save seeds, or engages with breeding work to conserve traditional and/or rare breeds on farm?	Performance

Theme E5 – Materials and Energy

Definition of Theme

Materials and energy in SAFA refer to the material input into an economy delivered by the natural environment, the transformation and use of that input in economic processes (extraction, conversion, manufacturing, consumption) and its return to the natural environment as residuals or wastes. The SAFA sub-themes are Material Use; Energy Use; and Waste Reduction and Disposal.

Relevance of Theme to Sustainability

The flows of materials into, within and out of the human economy have reached unprecedented levels. Unsustainable consumption and production patterns fuel material consumption, energy use and waste generation. For example, 30% of foods produced are not consumed, meaning the inputs made to its production are wasted as well. To date, physical scarcity has not been a major constraint to the global availability of most materials. The large quantity of global waste poses great challenges with regard to recycling and disposal. Improper transport of hazardous waste, especially its export to countries with insufficient national regulations on waste treatment, poses serious threats to humans and ecosystems. Sustainable management of these flows is a key component of the green economy concept (UNEP, 2011), which rests on the twin pillars of efficient resource utilization and circular material flows (recycling and reuse).

Global energy use is by many accounts the most damaging activity on the planet. Its many adverse impacts degrade air, water, and soil quality, human and ecological health. Current energy comes primarily from the burning of fossil fuels such as coal, oil and natural gas. This burning produces a number of by-products, mostly which go into the air as pollution, effecting people's health and damaging soil and crops, freshwaters and streams, ecosystems and accelerate corrosion of buildings and building materials.

Substantial cuts in the consumption of fossil fuels and associated CO₂ emissions are necessary in order to avoid further temperature increases and the associated impacts of climate change. With population growth, industrialization and urbanization trends, demand is rising. Challenges to sustainable energy use include geological (limited stocks of fossil fuels), biological (limited productivity of vegetation), economic (cost of renewables) and social (limited acceptance of renewables) limitations. The two main strategies to slow down the growth and impact of burning fossil fuels are: (i) energy efficiency – through technology and eliminating waste. Estimates are that the world could halve the growth of energy demand simply through energy efficiencies; (ii) use more renewable/alternative fuels. Renewable fuels are those that are continuously available and sustainable in our environment and emissions neutral like wind, solar, geothermal, hydropower and biomass.

E 5 MATERIALS & ENERGY			
Theme Goal: Damage to ecosystems and contribution to resource scarcity resulting from non-renewable material extraction, non-renewable energy use and waste disposal are minimised through economical and efficient use, consequent reuse and recycling/recovery and safe disposal.			
Sub-theme	Sub-theme objective	Sub-theme core indicators	Type of Indicator
E 5.1 Material Use	Material consumption is minimized and reuse, recycling and recovery rates are maximized.	E 5.1.1 Material consumption practices What practices and activities have you implemented that effectively replaced virgin non-renewable materials by recycled/reused/renewable ones in your operation and replaced synthetic inputs by natural inputs?	Practice
		E 5.1.2 Nutrient balances What is the nutrient balance of your operation (supply vs demand, or imports vs exports at farm or parcel level) for nitrogen and phosphorus?	Performance
		E 5.1.3 Renewable and recycled materials What share of your total material use is generated from off-operation virgin sources?	Performance
		E 5.1.4 Intensity of material use How has the quantity of materials used per unit produce in your operation changed during the last 5 years?	Performance
E 5.2 Energy Use	Overall energy consumption is minimized and use of sustainable renewable energy is maximized.	E 5.2.1 Renewable energy use target Have you set a target for the share of renewable and sustainable energies in your total direct energy use?	Target
		E 5.2.2 Energy-saving practices What practices and activities have you implemented that effectively reduced the energy requirements in your operation?	Practice
		E 5.2.3 Energy consumption How has your total direct energy consumption changed during the last 5 years?	Performance
		E 5.2.4 Renewable energies What share of your total direct energy use is generated from sustainable renewable sources?	Performance
E 5.3 Waste Reduction & Disposal	Waste generation is prevented and is disposed of in a way that does not threaten the health of humans and ecosystems and food loss/waste is minimized.	E 5.3.1 Waste reduction target Have you set a target in reducing the generation of waste, as well as the hazardousness of this waste, in or by your operation?	Target
		E 5.3.2 Waste reduction practices What practices and activities have you implemented that effectively reduced waste generation in your operation?	Practice
		E 5.3.3 Waste disposal How much solid waste do you generate that is not segregated, stored and treated such that it is rendered non-hazardous to humans and environment at the point of release from the enterprise?	Performance
		E 5.3.4 Food loss and waste reduction What is the share of food that is lost or wastes in your operations and what share is reused (charities, feed), recycled or recovered (compost, bioenergy)?	Performance

Theme E6 – Animal Welfare

Definition of Theme

Animal welfare is the physical and psychological well-being of animals. In SAFA, the sub-themes include Health and Freedom from Stress.

Relevance of Theme to Sustainability

The farm animal production sector is the single largest human user of land, contributing to soil degradation, water quality and availability issues, and air pollution, in addition to detrimentally impacting rural and urban communities, public health, and animal welfare. It is one of the key drivers of deforestation in the tropics. The scope of this sector's global impacts has been largely underestimated. Meat, egg, and milk production are not just the direct rearing and slaughtering of farm animals. Rather, the animal agriculture sector encompasses grain and fertilizer production, substantial water use, and significant energy expenditures for transportation of inputs and finished products. Animal agriculture's greatest environmental influence may be its contributions to climate change. According to the FAO, the animal agriculture sector is responsible for 18%, or nearly one-fifth, of human-induced greenhouse gas (GHG) emissions, greater than the share contributed by the transportation sector.

By 2050, global farm animal production is expected to double from present levels, with most of those increases in the developing world. Livestock production under conditions inappropriate for animal welfare and health is a major concern across production systems and geographical regions. Common problems include overstocking, reliance on un-adapted breeds, excessive or inadequate use of veterinary medicines, lack of space, light, clean water and adequate fodder, and cruel treatment. Ethical considerations are a major reason to take care of animal welfare. For agronomic reasons as well, they have to be kept such that their well-being is ensured, meaning that animals must be kept in an environmentally unproblematic and species-appropriate way.

During the last decade, many of the developed countries have seen a rapid move toward explicit farm animal welfare standards. In 2005 the World Organization for Animal Health (or OIE) adopted guidelines for the international welfare of domesticated and food animals. In Europe, the process has been led partly by national governments and the European Union which have created mandatory animal welfare standards for most animal-based commodities. In the United States, there are some legal protections against what are considered the worst abuses, but the food service and retail sectors have played a major role, with companies like McDonald's and Burger King creating standards that their suppliers are required to meet. There has also been caused by public shift in perceptions towards animals with demands for standards and safeguards for the care and use of animals in research, trade and production.

E 6 ANIMAL WELFARE			
Theme Goal: Animals are kept such that they can express their natural behaviour and are free from hunger, thirst, discomfort, pain, disease and other distress.			
Sub-theme	Sub-theme objective	Sub-theme core indicators	Type of Indicator (target, practice, performance)
E 6.1 Health and Freedom from Stress	Animals are kept under species-appropriate conditions and free from hunger and thirst, discomfort, pain, injury and disease, fear and distress.	E 6.1.1 Integrated animal health practices What activities and practices have you implemented that effectively promoted the health of animals, while reducing the use of veterinary drugs and preventing animal losses due to disease and injuries?	Practice
		E 6.1.2 Humane animal handling practices Which practices and activities have you implemented that effectively reduced the suffering and risk of injury of animals during all phases of their life, including transport and killing?	Practice
		E 6.1.3 Species-appropriate animal husbandry What share of your animals has the possibility to behave according to their specific needs?	Performance
		E 6.1.4 Freedom from stress What share of your animals have sufficient freedom to move around, live free of pain, discomfort and distress all the time, during all phases of their life, including during transport and killing?	Performance
		E 6.1.5 Animal health What share of your animals is healthy and has not required any treatment with veterinary drugs against illness or disease?	Performance

SAFA ECONOMIC DIMENSION

Themes, Sub-themes, List of Core Indicators

Theme C1 – Investment

Definition of Theme

In SAFA, the term ‘investment’ is seen from a microeconomic perspective, i.e. it is putting money into something, such as capital goods, human resources or ecosystems, with a view to gain. Investments at the enterprise, community and value chain development are considered. SAFA sub-themes are Internal investment; Community investment; Long-ranging investment and Profitability.

Relevance of Theme to Sustainability

Investment is an important factor in sustainable development. Improved production and marketing and transfer of financial resources and knowledge are critical to ensure that economic growth leads to social development, while preserving or enhancing the natural resource base. Decisions about how and where to invest reflect the strategic direction of the enterprise. Financial speculation, another form of investment, today has an enormous importance for the economy, including in the food and agriculture sector. Investments into sustainable development at the community level are important as corporate citizens. Investment in sustainable value chain development is considered as it requires coordinated investment by actors along the chain, with private enterprises having a key role in investing in improved logistics, transportation, post harvest treatment, storage facilities etc. Investment that is solely aimed at public relations (branding, advertisements etc.) does not fall into the scope of this theme.

Sustainable investment aims at supporting a development of the enterprise towards enhanced social, environmental, economic and governance performance. Such investment can for example take the form of research and development expenditures, development and/or acquisition of equipment that reduces polluting emissions to the environment, measures or technologies that enhance buffering capacity against any kind of shocks (e.g. build-up of soil organic matter to better withstand drought spells), and measures directed at capacity building or creating awareness of sustainability in the organization. Some investment into sustainability may have been done under different titles in the past, for example “lean manufacturing”, or “eco-efficiency”. A survey by MIT Sloan Management Review and The Boston Consulting Group revealed that “a growing number of companies are now increasing their investments in sustainability”; 59% of respondents said they had increased their commitment to sustainability from 2009 to 2010. As benefits, improved brand reputation (49%), reduced costs due to energy efficiency (28%) and increased competitive advantage (26%) were most frequently cited (Haanaes *et al.*, 2011).

Investment in the agriculture and food sector includes investment into agricultural and agro-ecological research, agricultural training, the improvement and utilization of neglected and underutilized crops, and smallholder agriculture (IAASTD, 2009).

C 1 INVESTMENT		
Theme Goal: Through its investments, the enterprise enhances its sustainability performance and contributes to sustainable development at the community, regional, national or international levels.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
C 1.1 Internal investment	In a continuous, foresighted manner, the enterprise invests into enhancing its sustainability performance.	C 1.1.1 Internal investment In which activities and practices have you invested during the last 5 years to improve and monitor your social, economic, environmental and governance performance?
C 1.2 Community investment	Through its investments, the enterprise contributes to sustainable development of a community.	C 1.2.1 Community investment How have your investments contributed to address and meet community needs, with an efficient use of resources and maintaining an environmental balance?
C 1.3 Long-ranging investment	Investments into production facilities, resources, market infrastructure, shares and acquisitions aim at long-term sustainability rather than maximum short-term profit.	C 1.3.1 Long-term profitability Do the enterprise' investments aim to establish and reinforce the conditions to maintain, generate and increase the enterprise profits in the long-term?
		C 1.3.2 Long-term business plan Do you have a business plan or an up-to-date document articulating revenue streams, growth plan, and a operational action plan that projects the generation of financial resources for the future?
C 1.4 Profitability	Through its investments and business activities, the enterprise has the capacity to generate a positive net income.	C 1.4.1 Net income Does the earned revenue that the enterprise retains exceed the total expenses, including interests and taxes associated with producing the goods sold, during the last five years?
		C 1.4.2 Cost of Production Have you completed a process to determine the total cost of the product sold and per unit of production to calculate your break-even point?
		C 1.4.3 Price determination Do you consider your break-even point to negotiate with your buyer (s) the selling price in all your contracts?

Theme C2 – Vulnerability

Definition of Theme

Vulnerability in terms of SAFA relate to is the degree of exposure to risk (hazard, shock) and uncertainty, and the capacity of households or individuals to prevent, mitigate or cope with risk. SAFA sub-themes are Stability of Supply; Stability of Market; Liquidity; Risk Management; Stability of Production.

Relevance of Theme to Sustainability

The vulnerability of enterprises, value chains and markets to the dynamics of natural and socio-economic environments can be buffered and their resilience enhanced by building and maintaining adaptive capacity. Building resilient social, economic and ecological systems is a key challenge on the way to sustainable development (Folke *et al.*, 2002).

In economic systems, strong dependence on single suppliers and/or buyers due to a dominance of one or few companies, or because only a single product is marketed, can increase the risk of the enterprise if this supplier/buyer or product is gone. Factors that contribute to resilience include a diversity of suppliers of production factors (including capital and labor) and a diversity of income sources. Complementary to diversity, the duration and stability of business relationships are predictors of resilience. Striking a balance between the long-term goal of maintaining the diversity of production and marketing channels needed to maintain resilience on the one hand, and the short-term drive to reduce unit costs on the other, is a major challenge. A third pillar of resilience is a sufficient buffering capacity, in the form of assets, inventory, formal and informal insurance, which can help an enterprise withstand shocks and changes.

Enterprises in the food and agriculture sector operate under very volatile conditions. Market dynamics, weather, political developments and technological progress are out of the control and can be unpredictable. The globalization and growth of markets, as well as climate change, enhance the uncertainty and volatility of economic and environmental conditions (e.g. IPCC, 2007). In today's industrial agro-ecosystems, which rely on a narrow species and genome basis, production can be disrupted if only one or few species substantially suffer stress or loss. While such agro-ecosystems mainly depend on the availability of buffers in the form of energy (fuel), pesticides and financial liquidity, buffering capacity can also be provided by soils with sufficient content and quality organic matter and a good water retention capacity, by a diversity of utilized species, varieties and breeds, and by services provided by intact natural ecosystems, e.g. biological pest control.

Vulnerability and resilience in agriculture and food systems are not internationally regulated. However, measures known to enhance resilience through increased diversity and buffer capacity are defined in international sustainable agriculture and organic standards, as well as for sustainable forestry, fisheries and aquaculture.

C 2 VULNERABILITY		
Theme Goal: The enterprise secures the resilience of production, supply and marketing in the face of environmental variability, economic volatility and social change.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
C 2.1 Stability of Supply	Stable business relationships are maintained with a sufficient number of input suppliers, and alternative procurement channels are accessible	C 2.1.1 Procurement channels Which actions and mechanisms have you put in place to reduce the risk to have input supply shortages, including maintaining ongoing business relationships with suppliers?
		C 2.1.2 Stability of supplier relationships What share of supplier contracts/business relationship has remained on-going over the last 5 years?
		C 2.1.3 Dependence on the leading supplier What share of your inputs comes from the leading supplier?
C 2.2 Stability of Market	Stable business relationships are maintained with a sufficient number of buyers, income structure is diversified, and alternative marketing channels are accessible	C 2.2.1 Stability of market Which actions and mechanisms have you put in place to ensure a diversified and consolidated income structure from your product sales or from the services that you provide?
C 2.3 Liquidity	Financial liquidity, access to credits and insurance (formal and informal) against economic, environmental and social risk enable the enterprise to withstand shortfalls in payment	C 2.3.1 Net cash flow Has the enterprise generated a positive net cash flow in the last five years?
		C 2.3.2 Safety nets Does the enterprise have access to formal or informal financial sources to withstand liquidity crises?
C 2.4 Risk management	Strategies are in place to manage and mitigate the internal and external risks (i.e. price, production, market, credit, workforce, social, environmental) that the enterprise could face to withstand their negative impact.	C 2.4.1 Risk management Does the enterprise have a plan to reduce and adapt itself against risks that could potentially threaten the business?
C 2.5 Stability of Production	Production (quantity and quality) is sufficiently resilient to withstand environmental, social and economic shocks.	C 2.5.1 Guarantee of production levels What are the actions and mechanisms that the enterprise has put in place to reduce the negative impact of the risks that could affect meeting the target volume of production and quality standards?
		C 2.5.2 Product diversification Does the enterprise produce more than one product, specie or variety of plant or animal for income generation?

Theme C3 – Product Quality and Information

Definition of Theme

In SAFA product safety is defined as the assurance that the food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use (FAO/WHO, 1997). Product quality is “the totality of features and characteristics of a product that bear on its ability to satisfy stated or implied needs.”(ISO). SAFA sub-themes are Food Safety, Product Information, and Food Quality.

Relevance of Theme to Sustainability

All people have the right to expect the products they consume, in particular their food, to be safe and suitable for consumption (FAO/WHO, 2003a). Likewise, producers, processors, retailers and consumers have a right to be informed by their suppliers about all attributes of a product relevant for its utilization. As value chains have become more complex, the number of opportunities for contamination and other quality loss; and for deception concerning origins and quality has increased.

Food can easily be contaminated, for example, through environmental pollution of air, water and soils, the intentional use of chemicals such as pesticides and animal drugs (Campbell, 1992), and microbiological contamination and spoilage. Contaminants may also be present in food as a result of the production, manufacture, processing, preparation, treatment, packing, packaging, transport or holding of such food (CAC, 2011). Food quality and safety can be achieved through management systems that are built on good agricultural and manufacturing practices. In addition, systematic preventive approaches such as Hazard analysis and critical control points (HACCP), controlling the flow of food ingredients and products along the entire food chain, as well as through traceability contribute to food safety and quality.

The growing number of food safety problems and consumer concerns has prompted governments all over the world to intensify their efforts to improve food safety (WHO, 2007).

C 3 PRODUCT QUALITY AND INFORMATION		
Theme Goal: Any contamination of produce with potentially harmful substances is avoided, and nutritional quality and traceability of all produce are clearly stated.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
C 3.1 Food Safety	Food hazards are systematically controlled and any contamination of food with potentially harmful substances is avoided.	C 3.1.1 Control measures Does the enterprise have food hazards and safety control measures in place that comply with correspondent and applicable regulations?
		C 3.1.2 Hazardous pesticides Have any of the employees handle, store or use any highly hazardous pesticides during the last five years?
		C 3.1.3 Food contamination incidents Were there any documented incidents where pesticide residues in ingredients or products have exceeded the maximum allowed limits during the last 5 years? Were there any other documented incidents of chemical or biological food contamination (e.g. due to the use of heavy metals, unapproved GMOs, mycotoxins, etc) during the last five years?
C 3.2 Food Quality	The quality of food products meets the highest nutritional standards applicable to the respective type of product.	C 3.2.1 Quality standards What share of the total volume of production complies with the required quality norms and standards?
C 3.3 Product Information	Products bear complete information that is correct, by no means misleading and accessible for consumers and all members of the food chain.	C 3.3.1 Product labelling Are applicable product labeling codes fully complied with, and can the enterprise show evidence of exceeding these standards wherever possible?
		C 3.3.2 Traceability system Does the system ensure traceability over all stages of the food chain so that products can be easily and correctly identified and recalled?
		C 3.3.3 Certified production Can the enterprise identify all ingredients and inputs used by it in its enterprise and can it provide evidence of certified sustainable sourcing of these?

Theme C4 – Local Economy

Definition of Theme

Local economy in SAFA is considered from the perspective of the enterprise and the contributions that the enterprise makes to local economic development (LED). SAFA sub-themes are Value Creation and Local Procurement.

Relevance of Theme to Sustainability

In a sustainable economy, the region is not only a place to work, but one where incomes are also spent and invested and where taxes are paid. Local economic development (LED) is a process in which all sectors work together to stimulate local commercial activity. It has been considered a cornerstone of sustainable development (UN Habitat, 2009). A sustainable local economy is diversified and does not simply shift the costs of maintaining its good health onto other regions. LED can thus reduce environmental pressures related to transportation of goods over large distances (Norberg-Hodge & Gorelick, 2002). It adds as much value as possible in the region rather than just exporting raw materials.

LED should foster employment, infrastructural development, as well as a high quality of life (OECD, 2010). Beyond economic growth, it is about providing opportunities for all to obtain decent work at the local level. It can contribute to a region's becoming more resilient to turbulence in the global economy. Rather than opposing globalization, LED strategies aim at strengthening local economies such that they benefit from the exchange with other regions rather than becoming overly fragile and losing their functionality.

In rural areas, farming substantially contributes to LED through value and job creation and the creation and maintenance of infrastructure (FOAG, 2009). This is particularly relevant for a sustainable development of these areas, as over the last 50 years, 800 million people have moved from rural areas to cities and to foreign countries (IFAD/FAO, 2008). This development often goes along with a "brain drain", i.e. a loss of competent, innovative workforce who could otherwise play a positive role for the sustainable development of the region. The lack of investment in agriculture and rural areas, not only by private investors, but also by governments, is among the principal causes of rural poverty and migration into cities (IFAD, 2007). This lack of investment has been identified as an underlying cause of the recent food crisis and of the difficulties developing countries encountered in dealing with it. Enterprises in the food and agriculture sector thus are in a particularly good position to contribute to local economic development in those areas where local value creation is needed the most.

C 4 LOCAL ECONOMY		
Theme Goal: Through production, employment, procurement, marketing and investments in infrastructure, the enterprise contributes to sustainable local value creation.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
C 4.1 Value Creation	Enterprises benefit local economies through employment and through payment of local taxes.	C 4.1.1 Regional workforce Has the enterprise hired during the last five years regional employees when similar skills, profile and conditions are offered in relation to other candidates?
		C 4.1.2 Fiscal commitment Does the enterprise pay the applicable taxes as indicated by local regulations?
C 4.2 Local Procurement	Enterprises substantially benefit local economies through procurement from local suppliers	C 4.2.1 Local procurement Has the enterprise procured from local suppliers when equal or similar conditions apply in comparison to non-local suppliers?

SAFA SOCIAL DIMENSION

Themes, Sub-themes, List of Core Indicators

Theme S1 - Decent livelihood

Definition of Theme

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living that meets the basic needs to maintain a safe, decent standard of living within the community and have the ability to save for future needs and goals. SAFA sub-themes are Right to Quality of Life, Capacity Building, and Rights of Fair Access to Land and Means of Production.

Relevance of Theme to Sustainability

The Universal Declaration of Human Rights claims that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control” (UN, 1948). Livelihood concepts, as reviewed by Hussein (2002), adopt a broader focus than just on the material basis of living. According to Chambers and Conway (1991), a livelihood comprises the capabilities, assets and activities required for a means of living. It is sustainable when it can withstand and recover from stresses and shocks and maintain or improve its capabilities or assets without undermining the natural resource base.

An adequate standard of living is out of the reach for billions of people around the world, particularly for rural populations in developing countries, for masses of people who have been dislocated from their homelands by economic pressures or environmental crises, and for vulnerable groups such as women and children. Some 1.4 billion people live in extreme poverty (in 2005) and more than 2.6 billion people lack access to improved sanitation. Food security is no reality for 900 million people estimated to be undernourished. Analysis of the current situation shows a degradation of livelihoods in many places around the world. Indeed, over-exploitation of natural resources impairs people’s capabilities to cope with stresses and shocks and economic crisis resulting in significant job and land losses add pressures on livelihoods.

The food and agriculture system plays a pivotal role to provide sustainable livelihoods, as it can provide employment and create value for particularly vulnerable people. For smallholdings and family farms in general, the sustainability of the enterprise and that of the family’s livelihood are intertwined, and one cannot be achieved in isolation from the other.

S 1 DECENT LIVELIHOOD		
Theme Goal: The enterprise provides assets, capabilities and activities that increase the livelihood security of all personnel and the local community in which it operates.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
S 1.1 Right to Quality of Life	All primary producers, small holders and employees enjoy a livelihood that provides a culturally appropriate and nutritionally adequate diet and allows time for family, rest and culture.	S 1.1.1 Right to quality of life Do all primary producers who supply enterprises and all employees earn the local living wage, have adequate diets and time for family, rest and culture?
S 1.2 Capacity Building	Through training and education, all personnel have opportunities to acquire the skills and knowledge necessary to undertake current and future tasks required by the enterprise. Primary Producers have the resources to provide for further training and education for themselves and members of their families.	S 1.2.1 Capacity building Do primary producers and hired workers have opportunities to increase skills and knowledge, to advance within the enterprise in which they work or to build the future of their own enterprise?
S 1.3 Rights to Fair Access to Land and Means of Production	Primary producers have access to adequate fertile land and to the means of production.	S 1.3.1 Rights to fair access to land and means of production Do primary producers, including indigenous peoples, own or lease long-term at a fair price an amount of fertile land adequate to provide for their livelihood? Do they also have the necessary means of production to make fair trading possible?

Theme S2 - Fair Trading Practices

Definition of Theme

Fair trading practices in SAFA include both legal and human rights that allow farmers, fishers, craftspeople and other primary producers to have access to markets where fair prices are negotiated, stable, based on true costs, agreements are long-term and where contracts, whether written or verbal, include a process for settling disputes free from retaliation in a mutually agreed manner. The SAFA sub-theme is Responsible Buyers.

Relevance of Theme to Sustainability

The fair trading practices theme covers the following core indicators for primary producers: the freedoms and rights of association, to collective bargaining, to fair choice of buyers and fair competition, to fair prices, and to fair negotiations and fair trading conflict resolution. The buyers' responsibilities are to fully recognize these rights and freedoms and to negotiate in good faith for mutually agreed fair terms and conditions.

While it is widely recognized that respecting the rights of workers and paying them living wages is essential to agricultural sustainability, fair trading practices for primary producers, whether they employ workers or do all the work themselves, is also essential to maintaining the agricultural sustainability of their enterprises for the long term and in cases where primary producers directly hire workers, it is a fundamental prerequisite for worker rights to be fully achievable. With the globalization of trade, unfair competition and practices have emerged to create a crisis for primary producers in both developing and developed countries. Primary producers are losing their land, driven to the cities by wars, environmental disasters, misguided public policy and economic desperation. The highly concentrated and multinational agricultural buyers often receive governmental supports that distort markets, encouraging pricing schemes that fail to reflect their full costs to society and the environment while also failing to cover the full costs of production for primary producers. Food policies that encourage or reward the undermining of fair trading practices put constant downward pressure on the long-term sustainability of primary producers.

The position on human rights for workers adopted in SAFA - that of the UN 'Protect, respect and remedy' framework, proposed by the Special Representative of the Secretary-General on the issue of Human Rights and transnational corporations and other business enterprises (UNHRC, 2011) – applies as well for family-scale producers. The 'respect' pillar of the framework addresses business enterprises. They are responsible for respecting human rights wherever their own business activities and those directly linked with their business relationships cause human rights impacts. In some countries and in some jurisdictions legal support for fair trading exists, but in all too many rural areas around the globe, primary producers face buyers without adequate oversight, or the necessary tools, information or power to negotiate fair terms. Primary producers also bare an inordinate share of the risks posed by climate and environmental disasters, while receiving market terms that are not sustainable or fairly established. By prioritizing fair trading practices, SAFA helps set the groundwork for programs that encourage and develop collaborative and cooperative relationships among primary producers and between those producers and the people who work for them. Only by recognizing their common interests will producers and their workers have the power to transform the present globalized markets into a just and sustainable food system.

S 2 – FAIR TRADING PRACTICES

Theme Goal: Fair trading practices provide producers and buyers with prices that reflect the true cost of the entire process of sustaining a regenerative ecological system, including support for right livelihood for primary producers, their families and employees.

Sub-theme	Sub-theme objective	Sub-theme Core indicators
S 2.1 Responsible buyers	The enterprise ensures that a fair price is established through negotiations with suppliers that allows them to earn and pay their own employees a living wage, and cover their costs of production as well as maintain a high level of sustainability in their practices. Negotiations and contracts (verbal or written) are transparent, based on equal power, terminated only for just cause, and terms are mutually agreed upon.	S 2.1.1 Suppliers' freedom of association and right to collective bargaining Do buyers explicitly recognize and support suppliers' (particularly primary producers) rights to freedom of association and to collective bargaining for all contracts and agreements?
		S 2.1.2 Fair pricing and negotiated contracts or agreements Do buyers through their policies and practices recognize and support suppliers' (particularly primary producers) rights to fair pricing and fair contracts?

Theme S3 - Labour Rights

Definition of Theme

Labour rights in SAFA are the group of legal rights and claimed human rights having to do with labour relations between workers and their employers, usually obtained under labour and employment law. SAFA sub-themes are Employment Relations; Forced Labour; Child Labour and Employees' Freedom of Association and Right to Bargaining.

Relevance of Theme to Sustainability

Basic human needs and rights are a framework for human development that has been acclaimed by the vast majority of countries. However, enforcement of international labour standards still represents a major challenge for the sector. Overall, due in particular to its largely informal nature, rural work is seldom covered by national labour legislation, in law and in practice. In some countries and sectors of the economy, human rights violations are a reality, including beatings and violence, the denial of basic freedoms, intimidation and harassment, and even torture and death. The question of how business, particularly multinational enterprises, should deal with human (and thus also labour) rights issues not covered by national law is the subject of intensive debate. The position on the issue adopted in SAFA is that of the UN 'Protect, respect and remedy' framework, proposed by the Special Representative of the Secretary-General on the issue of Human Rights and transnational corporations and other business enterprises (UNHRC, 2011). The 'respect' pillar of the framework addresses business enterprises. They are responsible for respecting human rights wherever their own business activities and those directly linked with their business relationships cause human rights impacts.

Where the principles underlying the international declarations and covenants on human and labour rights have been put into national law, their relevance to the food and agriculture industries is obvious. Many companies in the food and agriculture sector pro-actively recognize their potential to support human rights within their value chains, and also the benefits that arise from doing so. Many international standards and approaches also implemented in the sector address human and labour rights. Human Rights and labour rights are also a central issue in the standards of multi-stakeholder commodity roundtables. As labour rights can be a sensitive topic, for example on family farms, indicator selection and data collection in the context of SAFA must be done very carefully. For example, it is recommendable to gather evidence from local communities and civil society organizations, including producers' and workers' organizations, as well as from labour inspectors, in addition to interviewing employees directly. Such mechanisms are particularly important in order to track the respect of main international labour standards in the frame of business relationships established (e.g. sub-contractors).

S 3 LABOUR RIGHTS			
Theme Goal: The enterprise provides regular employment that is fully compliant with national law and international agreements on contractual arrangements, labour and social security.			
Sub-theme	Sub-theme objective	Sub-theme Core indicators	
S 3.1 Employment Relations	Enterprises maintain legally-binding transparent contracts with all employees that are accessible and cover the terms of work. Employment is compliant with national laws on labour and social security.	S 3.1.1 Employment relations Does the enterprise have written agreements with their employees that meet and/or exceed national and international labor treaties including social security? For primary producers: is there a clear understanding of the wages and conditions of work between the employer and employees?	
S 3.2 Forced labour	The enterprise accepts no forced, bonded or involuntary labour, neither in its own operations nor those of business partners.	S 3.2.1 Forced labour Does the enterprise, employ people who are not free to quit or who cannot raise grievances without fear of retaliation?	
S.3.3 Child Labour	The enterprise accepts no child labour that has a potential to harm the physical or mental health or hinder the education of minors, neither in its own operations nor those of business partners.	S 3.3.1 Child labour Does the enterprise or its subsidiaries or sub-contractors employ minor children, 16 years of age or younger, who are working full time or more, engaged in jobs that are dangerous to them physically, mentally or morally, and who are deprived of the opportunity to live as children, to attend school and/or other appropriate training?	
S 3.4 Employees' Freedom of Association and Right to Bargaining	All persons in the enterprise can freely execute the rights to (i) negotiate the terms of their employment individually or as a group, (ii) form or adhere to an association defending workers' rights and (iii) collectively bargain, without retribution.	S 3.4.1 Employees' freedom of association and right to bargaining Are the employees in an enterprise free to negotiate as individuals or as groups or through a union or representatives of their choosing to set the terms of their employment?	

Theme S4 - Equity

Definition of Theme

Equity involves the degree of fairness and inclusiveness with which resources are distributed, opportunities afforded and decisions made. SAFA sub-themes are Non-discrimination; Gender Equality and Support to Vulnerable People.

Relevance of Theme to Sustainability

Social equity is one of the principal values underlying sustainable development, with all people and their quality of life being recognized as a central issue. Equity involves the degree of fairness and inclusiveness with which resources are distributed, opportunities afforded and decisions made. It includes the provision of comparable opportunities of employment and social services, including education, health and justice. Significant issues related to its achievement include the distribution of productive resources and employment, gender and ethnic inclusiveness, and inter-generational opportunity. As discrimination against women prevails in many places, gender equality is particularly important. Substantially more women live in poverty (829 million) than men (522 million). There is increased recognition of crucial links between poverty eradication, employment and equality (ILO, 2011). Poverty eradication programmes that focus on general income levels only (e.g. by providing income support) frequently miss the underlying causes of vulnerability. For example, schooling levels among poor children can be raised through spending on education, but future income will not increase without policies that effectively address causes of economic vulnerability, such as ethnic, racial and gender discrimination (UN, 2010). In agriculture, government aid and training programs must extend to women producers as well as men, and avoid situations where the man of the family takes over land for market crop production that the wife is using for family subsistence.

In a business context, implementing the equity concept means that any discrimination of persons or groups on the basis of whatever characteristics must be avoided. This requirement applies to hiring, promotion, job assignment, termination, compensation, working conditions and even harassment, and it pertains to direct as well as indirect forms of discrimination (ILO, 2011). Enterprises are confronted with equity aspects also in their relations with suppliers, contractors, consumers or shareholders. Equity in business relations is a principal pillar of Good Corporate Governance.

In the agriculture and food sector, vulnerable and precarious working conditions are particularly prevalent. The sector employs large numbers of non-salaried family members, in particular women, of workers that have not benefited from professional training, and of seasonal workers, many of them foreigners at the location where they work. The provision of these types of work should on the one hand be recognized as a substantial benefit of the sector to society. On the other hand, it implies a need and responsibility to pay particular attention to equity at work and, on family farms, in the household and in the apportionment of resources between cash crops and subsistence.

S 4 EQUITY		
Theme Goal: The enterprise pursues a strict equity and non-discrimination policy and pro-actively supports vulnerable groups.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
S 4.1 Non-discrimination	A strict equity and non-discrimination policy is pursued towards all stakeholders. Non-discrimination and equal opportunities are explicitly mentioned in enterprise hiring policies, employee or personnel policies whether written or verbal or Code of Conduct and adequate means for implementation and evaluation are in place.	S 4.1.1 Non-discrimination Does the enterprise discriminate against particular groups, or by gender, or by sexual identity in hiring, job allocation, promotions and firing or in awarding contracts to primary producers for supplies?
S 4.2 Gender Equality	There is no gender disparity concerning hiring, remuneration, access to resources, education, and career opportunities.	S 4.2.1 Gender equality Does the enterprise discriminate against women in hiring, remuneration, training, and advancement, access to resources or firing?
S 4.3 Support to Vulnerable People	Vulnerable groups, such as young or elderly employees, women, the disabled, minorities and socially disadvantaged are proactively supported.	S 4.3.1 Support to vulnerable people Does the enterprise accommodate varying levels of ability and disability, young workers and aged ones? Does the enterprise also provide resources to the community to support vulnerable people with social and health services, training and cultural events for women, minorities and the disadvantaged?

Theme S5 – Human Health and Safety

Definition of Theme

For SAFA human health and safety is the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations (ILO/WHO). SAFA sub-themes are Workplace Safety and Health Provisions for Employees, and Public Health.

Relevance of Theme to Sustainability

Occupational safety and health are of paramount importance for the social sustainability of personnel relations, for enterprises on all scales from the smallest holding to the largest factory or plantation, and for national economies. There is growing evidence that improving healthcare, fighting disease and increasing life expectancy are all essential for supporting economic growth and long-term business success. Neither development nor enterprises can be sustained when a high proportion of the population and the workforce suffer from poor health. A clean environment is important to health and well-being. Protecting and promoting human health requires primary health care – especially in rural areas – controlling communicable diseases and preventing health hazards originating in the working environment and from diets (see “Product safety and quality”).

The health of employees has a direct impact on their productivity at all types of work (Nelson & Prescott, 2008). Worldwide, more than 350,000 work-related fatal accidents and 2 million cases of work-related fatal disease occur each year. The number of non-fatal accidents (causing more than four days absence from work) is estimated to be 1,000 times higher (Al Tuwaijri, 2008). Beside the loss of work performance, the company sustains follow-on expenses for administration, recruitment and efforts for reintegration and due to loss of knowledge. The sustainability of the workplace should be improved by considering health and safety concerns in the physical and psycho-social work environment, including the organization of work and workplace culture, as well as personal health resources in the workplace. Furthermore, participation to improve the health of workers’ families and other members of the community is desirable (Burton, 2010).

In the food and agriculture sectors, the occupational security and health situation is characterized by specific hazards and risks, with high numbers of incidences (Toscano, 1997; EWCS, 2007). Straining physical work, exposure to harmful substances (e.g. chemicals, pesticides and dust), work with machines, equipment and animals all can cause health problems and even death. Many enterprises in the sector are small and thus particularly suffer from absences from work and lack of resources to pay for health services or support. Working hours in the sector are often very long, especially in family enterprises and during the harvesting season, which can be critical for health and safety as well (see “Labour rights”).

S 5 – HUMAN HEALTH AND SAFETY

Theme Goal: The enterprise pursues a strict equity and non-discrimination policy and pro-actively supports vulnerable groups.

Sub-theme	Sub-theme objective	Sub-theme Core indicators
S 5.1 Workplace Safety and Health Provisions for Employees	The enterprise ensures that the workplace is safe, has met all appropriate regulations, and caters to the satisfaction of human needs in the provision of clean water, healthy food, clean accommodation (if offered) etc.	S 5.1.1 Workplace safety and health provisions for employees Does the enterprise provide training in health and safety, ensure a safe, clean and healthy workplace and provide health coverage for employees?
S 5.2 Public Health	The enterprise ensures that operations and business activities do not limit the healthy and safe lifestyles of the local community and contributes to community health resources and services.	S 5.2.1 Public health Does the enterprise take measures to avoid polluting or contaminating the local community and contribute to the health of the local community?

Theme S6 – Cultural Development

Definition of Theme

Cultural diversity is the quality of different cultures. Cultural identity is composed of ethnicity, language and religion and cultural diversity refers to the innumerable forms taken through the process of acculturation, included but not limited to age, sexual orientation, economic status, spiritual belief and political affiliation. SAFA sub-themes are Indigenous Knowledge and Food Sovereignty.

Relevance of Theme to Sustainability

Cultural diversity is a common heritage of vital importance for humankind. It is a concept that defies simple definition, with different meanings depending on context (De Guzman et al., 2007). The term “culture” relates to combinations of ethnicity, language and religion characteristics. Awareness of cultural diversity has become relatively commonplace, as a result of the globalization of exchanges and the greater receptiveness of many societies to one another (UNESCO, 2008). However, greater awareness alone does not guarantee the preservation of cultural diversity. Awareness and preservation are all the more important, since culture is a determining factor for the relevance, failure and success of development interventions. Cultural diversity is an asset that has been considered indispensable for reducing poverty and achieving a sustainable development. Understanding this diversity is a prerequisite for development interventions (UNESCO, 2008).

Workplace diversity as well is related to cultural diversity. Changing demographics and an increasingly diverse marketplace are urgent reasons for an increased interest in managing diversity at work. Many employers have come to realize that a diverse work force is not a burden, but a potential strength (Henderson, 1994). Companies providing culturally competent workplaces may gain a sustainable advantage over competitors that are less aware and active in this regard. Cultural competence should therefore become a core value of the organization. Diversity management has become important for many organizations, companies and governments, and valuing diversity is essential for an effective management of human resources (Pitts, 2006).

One – but not the only – aspect of cultural diversity that is very important in the food and agriculture sector, also in economic terms, is the issue of intellectual rights emanating from traditional, indigenous knowledge of species and ecosystems. Particularly rural communities often dispose of a wealth of knowledge and have found ways to use genetic resources that can be commercially utilized to develop food, medicinal and other products. Where genetic resources and associated traditional knowledge are commercially used, this should take place with the prior informed consent of indigenous and local communities. Benefits resulting from the use of genetic resources rightfully held by indigenous and local communities should be shared with those communities (Nagoya Protocol, 2009). The importance of cultural diversity was recognized in the Universal Declaration on Cultural Diversity, adopted in 2001, which aims to “preserve cultural diversity as a living, and thus renewable, treasure that must not be perceived as being unchanging heritage, but as a process guaranteeing the survival of humanity” (UNESCO, 2001). Concerning indigenous knowledge, the above mentioned Nagoya Protocol, adopted in 2010 at the Conference of Parties to the Convention on Biological Diversity (CBD), contains access and benefit sharing requirements for the utilization of traditional and cultural knowledge.

S 6 CULTURAL DEVELOPMENT		
Theme Goal: The enterprise respects the intellectual property rights of indigenous communities and the rights of all stakeholders to choose their lifestyle, production and consumption choices.		
Sub-theme	Sub-theme objective	Sub-theme Core indicators
S 6.1 Indigenous Knowledge	Intellectual property rights related to traditional and cultural knowledge are protected, and recognized.	S 6.1.1 Indigenous knowledge Does the enterprise recognize and respect the universal rights of indigenous communities to protect their knowledge? If appropriated and acquired, has the enterprise remunerated indigenous communities in a fair and equitable manner, based on mutually agreed upon terms?
S 6.2 Food Sovereignty	The enterprise contributes to and benefits from exercising the right to choice and ownership of their production means, specifically in the preservation and use of traditional, heirloom and locally adapted varieties or breeds.	S 6.2.1 Food s sovereignty Does the enterprise contribute to the food sovereignty of their region by exercising their ability to preserve and use traditional, heirloom and locally adapted varieties or breeds, as well as supporting others in pursuing this goal?

Appendix A: SAFA Core Indicators

Indicator Description, Methodology, Ratings and Resources

For conducting a SAFA, indicators are specific measurements or assessments that provide evidence as to whether or not a certain condition exists. By using indicators, an entity can demonstrate their level of sustainability performance on the SAFA themes and sub-themes.

SAFA's core indicators were developed based on expert analysis of what the most critical individual components of a sub-theme are that must be measured in order to reach the sustainability objective defined for each of the SAFA sub-themes. The core indicators' set is needed for a general level of reporting, as SAFA users do not necessarily have the knowledge to develop indicators themselves, without the risk of lowering the bar of the assessment.

Core indicators are applicable at the macro level – meaning to all enterprise sizes and types, and in all contexts. Core indicators serve the purpose of providing standardized metrics to guide future assessments on sustainability. However, core indicators only contain the frame for the rating scale. Within the Guidelines, core indicators have a rating definition of the top level of sustainability performance (green score) and examples of the unacceptable levels of performance (red score), but they do not contain full rating scales (as this is only possible at the contextualized level) and are not a sufficient indicator set from which to complete an assessment by themselves. Customized indicators are to be developed by the assessor for determining performance in the intermediate performance levels, between green and red, depending on context.

Each of the SAFA core indicators is described through a detailed 2 pages. This includes a description of the core indicator; what is being measured; relevance to supply chain levels and enterprise types; unit of measure or metric; methodological description of means of measure; ratings; limitations of the core indicator; and sources for additional information on the core indicator for tools or contextualization. An overview Table summarizes all core indicators per sub-theme and theme.

Overview Table of Core Indicators per Sub-themes and themes		
Dimension G: GOOD GOVERNANCE		
Themes	Sub-Themes	Core Indicators
G1 Corporate Ethics	G1.1 Mission Statement	G 1.1.1 Mission explicitness G 1.1.2 Mission driven
	G 1.2 Due Diligence	G 1.2.1 Due diligence
G2 Accountability	G 2.1 Holistic Audits	G 2.1.1 Holistic audits
	G 2.2 Responsibility	G 2.2.1 Responsibility
	G 2.3 Transparency	G 2.3.1 Transparency
G3 Participation	G 3.1 Stakeholder Dialogue	G 3.1.1 Stakeholder identification
		G 3.1.2 Stakeholder engagement
		G 3.1.3 Engagement barriers
		G 3.1.4 Effective participation
	G 3.2 Grievance Procedures	G 3.2.1 Grievance procedures
	G 3.3 Conflict Resolution	G 3.3.1 Conflict resolution
G4 Rule of Law	G 4.1 Legitimacy	G 4.1.1 Legitimacy
	G 4.2 Remedy, Restoration and Prevention	G 4.2.1 Remedy, restoration and prevention
	G 4.3 Civic Responsibility	G 4.3.1 Civic responsibility
	G 4.4 Resource Appropriation	G 4.4.1 Free, prior and informed consent
		G 4.4.2 Tenure rights
G5 Holistic Management	G 5.1 Sustainability Management Plan	G 5.1.1 Sustainability management plan
	G 5.2 Full-cost Accounting	G 5.2.1 Full-cost accounting
Dimension E: ENVIRONMENTAL INTEGRITY		
Themes	Sub-themes	Core Indicators
E1 Atmosphere	E 1.1 Greenhouse Gases	E 1.1.1 GHG reduction target
		E 1.1.2 GHG mitigation practices
		E 1.1.3 GHG balance
	E 1.2 Air Quality	E 1.2.1 Air pollution reduction target
		E 1.2.2 Air pollution prevention practices
		E 1.2.3 Ambient concentration of air pollutants
E2 Water	E 2.1 Water Withdrawal	E 2.1.1 Water conservation target
		E 2.1.2 Water conservation practices
		E 2.1.3 Ground and surface water withdrawals
	E. 2.2 Water Quality	E 2.2.1 Clean water target
		E 2.2.2 Water pollution prevention practices
		E 2.2.3 Concentration of water pollutants
		E 2.2.4 Wastewater quality
E3 Land	E 3.1 Soil Quality	E 3.1.1 Soil- improvement practices
		E 3.1.2 Soil physical structure
		E 3.1.3 Soil chemical quality
		E 3.1.4 Soil biological quality
		E 3.1.5 Soil organic matter content

	E 3.2 Land Degradation	E 3.2.1 Land conservation and rehabilitation plan
		E 3.2.2 Land conservation and rehabilitation practices
		E 3.2.3 Net loss/gain of productive land
E4 Biodiversity	E 4. 1 Ecosystem Diversity	E 4.1.1. Landscape/marine habitat conservation plan
		E 4.1.2 Ecosystem-enhancing practices
		E 4.1.3 Structural diversity of ecosystems
		E 4.1.4 Ecosystem connectivity
		E 4.1.5 Land–use and land-cover change
	E 4.2 Species Diversity	E 4.2.1 Species conservation target
		E 4.2.2 Species conservation practices
		E 4.2.3 Diversity and abundance of key species
		E 4.2.4 Diversity of production
	E. 4.3 Genetic Diversity	E 4.3.1 Wild genetic diversity enhancing practices
		E 4.3.2 Agro-biodiversity in-situ conservation
		E 4.3.3 Locally adapted varieties/breeds
		E 4.3.4 Genetic diversity in wild species
		E 4.3.5 Saving of seeds and breeds
E5 Materials and Energy	E 5.1 Material Use	E 5.1.1 Material consumption practices
		E 5.1.2 Nutrient balances
		E 5.1.3 Renewable and recycled materials
		E 5.1.4 Intensity of material use
	E 5.2 Energy Use	E 5.2.1 Renewable energy use target
		E 5.2.2 Energy-saving practices
		E 5.2.3 Energy consumption
		E 5.2.4 Renewable energies
	E 5.3 Waste Reduction and Disposal	E 5.3.1 Waste reduction target
		E 5.3.2 Waste reduction practices
		E 5.3.3 Waste disposal
		E 5.3.4 Food loss and waste reduction
E6 Animal Welfare	E 6.1 Health and Freedom from Stress	E 6.1.1 Integrated animal health practices
		E 6.1.2 Humane animal handling practices
		E 6.1.3 Species-appropriate animal husbandry
		E 6.1.4 Freedom from stress
		E 6.1.5 Animal health
Dimension C: ECONOMIC RESILIENCE		
Themes	Sub-themes	Core Indicators
C1 Investment	C 1.1 Internal Investment	C 1.1.1 Internal investment
	C 1.2 Community Investment	C 1.2.1 Community investment
	C 1.3 Long-ranging Investment	C 1.3.1 Long-term profitability
		C 1.3.2 Long-term business plan
	C 1.4 Profitability	C 1.4.1 Net income

		C 1.4.2 Cost of Production
		C 1.4.3 Price determination
C2 Vulnerability	C 2.1 Stability of Supply	C 2.1.1 Procurement channels
		C 2.1.2 Stability of supplier relationships
		C 2.1.3 Dependence on the leading supplier
	C 2.2 Stability of Market	C 2.2.1 Stability of market
	C 2.3 Liquidity	C 2.3.1 Net cash flow
		C 2.3.2 Safety nets
	C 2.4 Risk Management	C 2.4.1 Risk management
	C 2.5 Stability of Production	C 2.5.1 Guarantee of production levels
		C 2.5.2 Product diversification
C3 Product Quality and Information	C 3.1 Food Safety	C 3.1.1 Control measures
		C 3.1.2 Hazardous pesticides
		C 3.1.3 Food contamination incidents
	C 3.2 Food Quality	C 3.2.1 Quality standards
	C 3.3 Product Information	C 3.3.1 Product labelling
		C 3.3.2 Traceability system
		C 3.3.3 Certified production
C4 Local Economy	C 4.1 Value Creation	C 4.1.1 Regional workforce
		C 4.1.2 Fiscal commitment
	C 4.2 Local Procurement	C 4.2.1 Local procurement
Dimension S: SOCIAL WELL-BEING		
Themes	Sub-themes	Core Indicators
S1 Decent Livelihood	S 1.1 Right to Quality of Life	S 1.1.1 Right to quality of life
	S 1.2 Capacity Building	S 1.2.1 Capacity building
	S 1.3 Rights of Fair Access to Land and Means of Production	S 1.3.1 Rights to fair access to land and means of production
S2 Fair Trading Practices	S 2.1 Responsible Buyers	S 2.1.1 Suppliers' freedom of association and right to collective bargaining
		S 2.1.2 Fair pricing and negotiated contracts or agreements
S3 Labour Rights	S 3.1 Employment Relations	S 3.1.1 Employment relations
	S 3.2 Forced Labour	S 3.2.1 Forced labour
	S 3.3 Child Labour	S 3.3.1 Child labour
	S 3.4 Employees' Freedom of Association and Right to Bargaining	S 3.4.1 Employees' freedom of association and right to bargaining
S4 Equity	S 4.1 Non-discrimination	S 4.1.1 Non-discrimination
	S 4.2 Gender Equality	S 4.2.1 Gender equality
	S 4.3 Support to Vulnerable People	S 4.3.1 Support to vulnerable people
S5 Human Health and Safety	S 5.1 Workplace Safety and Health Provisions for Employees	S 5.1.1 Workplace safety and health provisions for employees
	S 5.2 Public Health	S 5.2.1 Public health
S6 Cultural Development	S 6.1 Indigenous Knowledge	S 6.1.1 Indigenous knowledge
	S 6.2 Food Sovereignty	S 6.2.1 Food sovereignty

SAFA GOVERNANCE CORE INDICATORS – OVERVIEW AND FULL EXPLANATIONS

Overview Table of Core Indicators per Sub-themes and themes		
Dimension G: GOOD GOVERNANCE		
Themes	Sub-Themes	Core Indicators
G1 Corporate Ethics	G1.1 Mission Statement	G 1.1.1 Mission explicitness G 1.1.2 Mission driven
	G 1.2 Due Diligence	G 1.2.1 Due diligence
G2 Accountability	G 2.1 Holistic Audits	G 2.1.1 Holistic audits
	G 2.2 Responsibility	G 2.2.1 Responsibility
	G 2.3 Transparency	G 2.3.1 Transparency
G3 Participation	G 3.1 Stakeholder Dialogue	G 3.1.1 Stakeholder identification
		G 3.1.2 Stakeholder engagement
		G 3.1.3 Engagement barriers
		G 3.1.4 Effective participation
	G 3.2 Grievance Procedures	G 3.2.1 Grievance procedures
G4 Rule of Law	G 3.3 Conflict Resolution	G 3.3.1 Conflict resolution
	G 4.1 Legitimacy	G 4.1.1 Legitimacy
	G 4.2 Remedy, Restoration and Prevention	G 4.2.1 Remedy, restoration and prevention
	G 4.3 Civic Responsibility	G 4.3.1 Civic responsibility
	G 4.4 Resource Appropriation	G 4.4.1 Free, prior and informed consent
		G 4.4.2 Tenure rights
G5 Holistic Management	G 5.1 Sustainability Management Plan	G 5.1.1 Sustainability management plan
	G 5.2 Full-cost Accounting	G 5.2.1 Full-cost accounting

Core Indicator name Mission explicitness (G 1.1.1)		
Dimension Governance	Theme Corporate Ethics (G 1)	Sub-theme Mission Statement (G 1.1)
1. Description		
The Mission Statement is the highest level governance statement and should proclaim a commitment to sustainability. To achieve this, the enterprise will have made its commitment to all areas of sustainability clear to the public, to all personnel and other stakeholders through publishing a mission statement or other similar declaration (such as a code of conduct or vision statement) that is binding for management and employees. The mission statement and attendant policies or codes of conduct should be living documents which establish a leadership direction and provide guidance and a benchmark against which all employees can deliver. It is also a standard which publicly identifies the values that all stakeholders can expect to see practiced by the enterprise.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Clarity about commitment to sustainability is central to sustainable practice in all enterprises. It is the starting point or initial statement of values and beliefs in strategic management. The form this will take will vary according to scale, education and culture. While in formal enterprises it will have a well-crafted mission statement, small farmers group in the Pacific Islands might equally express their commitment through a song or traditional name. Mission statements will be more explicit in enterprises with greater communications capacity and brand awareness. Conversely, they are less likely to be developed in smaller enterprises, in multi-lingual situations particularly primary production. Because sustainability concepts are often deeply embedded in traditional cultures, many traditional languages have rich idiom for sustainability-focused mission statements. Frequently, quite complex sustainability concepts are held in short phrases and in some cases single words. The ability to articulate and demonstrate sustainability values in environmental, economic, social and governance sense is the first step in sustainable practice and it is expected that all enterprises aspiring to sustainable status should be able to achieve this, whereas some other indicators require a level of literacy and governance capacity which will be more difficult for smaller, remote and emerging enterprises.		
3. Unit of Measurement or Metric		
The indicator is measured by sampling of personnel from all levels of the enterprise and establishing a percentage of compliance. Compliance is more than being able to recite a mission statement but includes being able to explain it and relate it to the work the employee is engaged in as well as broader more encompassing examples of the value in action.		
4. How to Measure		
1. Identify through inquiry the enterprise's mission. The mission statement should state in credible, clear and authentic words, how the enterprise intends to contribute to sustainable development. This should address social, environmental and economic sustainability.		

2. A review of key enterprise documents is conducted. At a minimum the Mission statement should be present in the enterprises main planning and reporting documents. 3. An interview sample of personnel from all levels of the organization is used to establish the % of staff who can identify and explain the organization's mission.
5. Rating
“Dark Green” score: 100% of employees are able to explain the enterprise's mission and identify how it influences the work which they do. Unacceptable practices (automatically lead to a “Red” SAFA score): • The enterprise has no articulated mission. • The mission of the enterprise does not address sustainability. • The key planning and reporting documents of the enterprise have no evidence of sustainability principles.
6. Limitations of the Core Indicator
Having a mission which includes sustainability principles is not evidence of sustainable practice. Mission statements can be used to project an image of sustainable practice beyond the actual effort of the enterprise. Some traditional farming practices pay great respect to the natural environment and are conducted in communal societies where all food is shared yet these groups may not necessarily articulate the sustainability values in relation to the enterprise itself particularly where the values are part of a broader spiritual or world view which is not internally contested. In such situations a degree of cultural fluency may be necessary to understand how the indicator is met.
7. Sources of information
• Starr, K. <i>The Eight-word Mission Statement</i>. Stanford Social Innovation Journal http://www.ssireview.org/blog/entry/the_eight_word_mission_statement • Mission Statements: A Thematic Analysis of Rhetoric Across International Type http://repository.upenn.edu/cgi/viewcontent.cgi?article=1012&context=gse_pubs • Discourse and the Projection of Corporate Culture: The Mission Statement http://das.sagepub.com/content/6/2/223.abstract

Core Indicator name Mission driven (G 1.1.2)		
Dimension Governance	Theme Corporate Ethics (G 1)	Sub-theme Mission Statement (G 1.1)
1. Description		
The Mission statement is the highest level governance statement and should proclaim a commitment to sustainability. To be mission driven the enterprise must prove the mission is evident in enterprise codes and policies and the governance body can demonstrate the influence of the mission in informing and developing policy and practice.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Clarity about commitment to sustainability is central to sustainable practice in all enterprises. It is the starting point or initial statement of values and beliefs in strategic management. The degree to which a mission statement is central to the sustainability effort will vary according to organizational scale and context as well as the degree of governance capacity (see G1.1.1.). All complying enterprises should be able to show how the value of sustainable development influences their decision making. But the most sophisticated will be able to show the sustainability values evident in its environmental, economic, social and governance performance. To this extent, G1.1.1 and G1.1.2 might apply to enterprises of different scale and governance capacity.		
3. Unit of Measurement or Metric		
Because the evidence of compliance is the governing body demonstrating how mission has influenced decision-making, the degree the extent of this will be necessarily qualitative.		
4. How to Measure		
1. Identify through inquiry the enterprise's mission. The mission statement should state in credible, clear and authentic words, how the enterprise intends to contribute to sustainable development. This should address social, environmental and economic sustainability. 2. A review of key enterprise documents is conducted. At a minimum, the Mission Statement should be present in the enterprises' main planning and reporting documents. 3. An interview sample of the governance body and senior management can identify the influence of the sustainability commitment in key decisions and processes.		
5. Rating		
"Dark Green" score: 100% of governance body and senior management can identify the influence of the mission sustainability commitments in the key decisions and processes of the enterprise. Unacceptable practices (automatically lead to a "Red" SAFA score): • The enterprise has no articulated mission. • The mission of the enterprise does not address sustainability. • The governance body and senior management are unable to identify any examples of mission driven decision making. • Significant decisions of the enterprise and its practices are systemically contrary to mission.		

6. Limitations of the Core Indicator

The indicator is difficult to reduce to an accurate metric however it is a useful formative rather than summative assessment. The act of inquiry builds the desired sustainable governance practice. Care will need to be taken that the indicator assessment is proportional to the scale of the organization so as to avoid it becoming unnecessarily burdensome and compromising the ability to achieve mission.

In smaller enterprises with limited governance resources, a thorough understanding of cultural context will be important in achieving a fair assessment. For example in post-colonial societies it is not uncommon for traditional values of sustainability to have been suppressed to the extent that workers experience one culture in the community and another alien culture in the workplace. In such cases real skill is required to integrate the best of traditional sustainability lore and practice into the work environment.

7. Sources of information

- Hulmes, D. *An autoethnographic exploration of Norway: nature and culture*. The Journal of Sustainability Education. http://www.jsedimensions.org/wordpress/content/an-autoethnographic-exploration-of-norway-nature-and-culture_2013_05/
- Stanborough, M. *The link between: culture and sustainability in municipal planning*. Culture and Local Governance. <https://uottawa.scholarsportal.info/ojs/index.php/clg-cgl/article/view/188>
- Sibilia, J. *In defense of mission-driven businesses*. Sustainable Industries. <http://www.sustainableindustries.com/articles/2012/10/defense-mission-driven-businesses?page=2>

Core Indicator name Due diligence (G 1.2.1)		
Dimension Governance	Theme Corporate Ethics (G 1)	Sub-theme Due Diligence (G 1.2)
1. Description		
The enterprise is pro-active in considering its external impacts before making decisions that have long-term impacts for any pillar; environmental, economic, social or governance of sustainability. This is accomplished by the enterprise following appropriate procedures such as risk assessments, and others that ensure that stakeholders are informed, engaged and respected.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Clarity about commitment to sustainability is central to sustainable practice in all enterprises. The form this will take will vary according to scale, education and culture. In larger enterprises it will be common to have a designated risk manager and a board reviewed risk matrix which is regularly up-dated. In food production and processing it will be essential to have food and staff safety plans in place and in use to achieve compliance. All complying enterprises should be able to show how the value of sustainable development influences their decision making. The role of stakeholders in assessing and addressing risk can be crucial but is by no means a cultural universal across the food production and distribution sector. For example, most contemporary analysis of workplace accident rates conclude that the development of a safety culture through the engagement of the workforce in creating a safe workplace is amongst the most reliable methods of reducing workplace injuries. However this pre-supposes a level of empowerment and workplace democracy which is present only where it has been won by organized labour or strong organizational governance has demanded this. Also sound sustainability practice embraces consumer advocacy and relies on an informed active consumer base to grow the business and push it to greater performance in its sustainability practice.		
3. Unit of Measurement or Metric		
Does not lend itself to metrics but these might develop in an enterprise specific or even sector/size specific way over time. Specific governance evidence of risk analysis and consideration typically through the use of risk management matrix or other risk tool.		
4. How to Measure		
1. A review of enterprise records finds evidence of risk management tool in place and regularly updated 2. An interview sample of the governance body and senior management can identify evidence of pro-active consideration of external impacts before implementation of policies and processes. 3. The enterprise regularly assesses the views and priorities of its stakeholders especially customers to ensure it is proactively aware of preferences and potential risks. 4. Evidence of appropriate food and workplace safety protocols in use and able to be identified by staff.		

5. Rating

“Dark Green” score:

The enterprise has a designated risk management manager or risk management service or mechanism and a regularly reviewed risk management tool. It is able to demonstrate proactive risk management and dialogue on risks with key stakeholders. Its risk management extends to third party suppliers and includes an active blacklist of unsustainable suppliers with whom the enterprise will not trade.

Unacceptable practices (automatically lead to a **“Red”** SAFA score):

- The enterprise has no evidence of proactive risk management
- The enterprise has consistent breach of food safety; environmental health; occupational health and safety codes.
- The enterprise has precedents of unsustainable good and services procurement or of acceptance of funds from unsustainable enterprises.
- Relevant stakeholders, such as staff in the case of occupational health and safety, are denied access to relevant reports and audits and are excluded from participating in discussions and decisions about workplace safety.

6. Limitations of the Core Indicator

The indicator will be more useful in larger formal enterprises and should be more strongly applied in enterprises with greater capacity for good governance.

7. Sources of information

- Hoffman, S. & Harder, W. 2010. *Food safety and risk governance in globalized markets*. <http://rff.org/RFF/Documents/RFF-DP-09-44.pdf>
- Christian, M. S., Bradley, J.C., Wallace, J.C. & Burke, M. J. 2009. *Workplace safety: a meta-analysis of the roles of person and situation factors*. Journal of Applied Psychology . <http://psycnet.apa.org/?fa=main.doiLanding&doi=10.1037/a0016172>
- Obstacles preventing employee involvement in health and safety. <http://www.hse.gov.uk/research/rrhtm/rr296.htm>
- Rosenstock, L., Cullen, M.R. & Fingerhut, M. *Advancing worker health and safety in the developing world*. http://globalhealth.stanford.edu/education/documents/Advancing_Worker_Health_Safety.pdf
- Garcia Martinez, M., Fearne, A., Caswell, J.A. & Spencer H. 2007. *Co-regulation as a possible model for food safety governance: opportunities for private-public partnerships*. Food Policy. <http://www.eng.auth.gr/mattas/foodima/pdf2.pdf>

Core Indicator name		
Holistic audits (G 2.1.1)		
Dimension Governance	Theme Accountability (G 2)	Sub-theme Holistic Audits (G 2.1)
1. Description		
All areas of sustainability in the SAFA dimensions for environment, social, economic and governance that pertain to the enterprise are monitored internally in an appropriate manner, and wherever possible are reviewed according to recognized sustainability reporting systems.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Genuine sustainability auditing is evidence of sustainability values being integrated into organizational governance and culture. Large enterprises could be expected to have institutionalized sustainability reporting and auditing. It would be expected that these would have at least one recognized sustainability audit tool and all of the dimensions of SAFA are reported on and audited. Using recognized tools such as Global Reporting Initiative (GRI) provides the opportunity for real improvements through benchmarking. Smaller enterprises and those early in a sustainability journey may find less prescriptive approaches, such as Social Auditing more accessible as it is able to make efficient use of all of an organization existing data systems. The highly customizable approach has proven effective in diverse cultures where evidence can be produced using a wider range of mediums than only paper or electronic record. For instance a Melanesian women's food co-operative did not have a formal mission statement and policies but had a song about their values which they performed and reflected on regularly particularly before difficult decisions were being made. As with all systems care needs to be taken to ensure the auditing system is relevant to the enterprise, consistent with its culture and not unduly burdensome so as to detract from the sustainability practice or reduce the ability of the enterprise to regularly use the tool.		
3. Unit of Measurement or Metric		
Does not lend itself to metrics but could consider % of SAFA dimensions audited using an internationally recognized tool.		
4. How to Measure		
Evidence of a recognized sustainability audit tool being operated by the enterprise, with the results of audit being regularly reviewed by board and management. Evidence may include but not be limited to: • Reports to Governance body from external or internal auditors; • Reports by governance body of the audit in key organizational documents such as annual plans and annual reports; • Processes for gathering data for audited sustainability reporting.		
5. Rating		
“Dark Green” score: The enterprise has a regular sustainability audit using a recognized tool and evidence that this is		

reviewed by governance body and peer reviewed by an external auditor. Unacceptable practices (automatically lead to a “Red” SAFA score): • The enterprise has no evidence of sustainability auditing • The enterprise has sustainability audits which are found to be falsified or consistently fail to address known deficiencies.
6. Limitations of the Core Indicator
The indicator will be more useful in larger formal enterprises and should be more strongly applied in enterprises with greater capacity for good governance.
7. Sources of information
• Auditing Corporate Social Responsibility: http://www.cgrforum.com/library/634370516637877500.pdf • Social Audit: http://www.worldbank.org/socialaccountability_sourcebook/Tools/PPM/sa_1.html • Global Reporting Initiative: https://www.globalreporting.org/Pages/default.aspx

Core Indicator name		
Responsibility (G 2.2.1)		
Dimension Governance	Theme Accountability (G 2)	Sub-theme Responsibility (G 2.2)
1. Description		
The enterprise's Governance body takes responsibility for the enterprise's performance in each pillar of the SAFA. The enterprise should regularly review its performance against mission with its stakeholders. The form of such stakeholder dialogue will differ markedly across organizational sizes and types but should be recorded by the governance body and included in its reporting to stakeholders, as well as informing planning and processes. Where the enterprise's performance is found wanting the governance body takes responsibility for ensuring performance is improved and engages stakeholders in the monitoring of performance improvement plans.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Responsibility for impact is inextricably linked to sustainable performance. Implicit in this is the understanding of governance driven continuous improvement. Improvements in the sustainable practice of organizations are effected through cycles of continuous action and reflection. Larger organizations will have regular and formal processes for measuring performance against mission. Smaller organizations and those recently on a journey of sustainability may struggle to devote resources to this process and it will be important to support this with lighter and culturally relevant mechanisms. Often a first step will be simply to record the discussions that are held and to show that the organization takes responsibility for its impact.		
3. Unit of Measurement or Metric		
Does not lend itself to metrics but could consider • How regularly performance is assessed; • How the enterprise's Governance body hold management accountable for improving the impact of the enterprise (part of the performance agreement between the board and CEO forms a standard part of senior executive contract); • How the enterprise deals with conflict with its stakeholders, best practice is taking responsibility for addressing issues and repairing relationships.		
4. How to Measure		
A review of enterprise records finds evidence responsibility for sustainable performance being taken and prioritized by the governance body. This includes performance being measured against mission and the views of pertinent stakeholders contributing to this assessment. Evidence may include but not be limited to: • Reports to Governance body from management comparing organizational performance and impact to the mission and sustainability goals; • Reports by governance body or other evidence of consideration of organizational impact and performance against mission; • Records of stakeholder consultation employed including which stakeholders were and were not included in the processes and any measures employed to ensure the views of		

vulnerable stakeholders were considered. Where there has been conflict with stakeholders, the governance body has immediately taken responsibility to investigate remedy and repair and has involved affected stakeholders directly in the process and assessment of success.
5. Rating
“Dark Green” score: The enterprise can clearly show that its governance body takes responsibility for its impact and has regular reviews of organizational impact and performance against mission and sustainability goals and appropriately engages all relevant stakeholders in the process. Unacceptable practices (automatically lead to a “Red” SAFA score): - The enterprise has no evidence of having compared performance to mission; - The enterprise has consistently excluded the views of relevant stakeholders; - The enterprise has not taken early responsibility for its impact in any dispute with stakeholders or clear breach of the pillars of sustainability.
6. Limitations of the Core Indicator
The indicator is very similar to G1.1.2 “Mission driven” and this may confuse however whereas G1.1.2 is measuring the degree to which Mission is embedded in organizational policy and processes this indicator is more specifically looking for evidence that responsibility for impact and performance is being taken by the enterprise's governance body and that impact and performance are being compared to and therefore able to be expressed in terms of mission. Organizations with more sophisticated governance will find this easier to understand and institute than smaller and emerging organizations however some small traditional enterprises have a very sound understanding of chiefly responsibility which may translate for this indicator..
7. Sources of information
- Global Reporting Initiative. https://www.globalreporting.org/Pages/default.aspx - Yorkshire water. Water team. http://www.cipr.co.uk/sites/default/files/YL-12120431.pdf - Macedo, I.M. & Pinho, J.C. <i>Exploring the link between mission statement and organizational performance in non-profit health care organizations</i>. http://www.marketing-trends-congress.com/sites/default/files/papers/2010/2010_fr_Macedo_Pinho.pdf - The mission management process. http://transition-support.com/Mission_management_process.htm <u>Sustainable and responsible business – European Policy on Corporate Social Responsibility:</u> http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/index_en.htm

Core Indicator name Transparency (G 2.4.1)		
Dimension Governance	Theme Accountability (G 2)	Sub-theme Transparency (G 2.4)
1. Description		
In sustainability circles there is a saying “a little sunlight is a great disinfectant“. This refers to how much better sustainability systems and initiatives run when organizations operate in a transparent manner. Real transparency involves understanding the information needs of stakeholders and making accurate, timely and relevant information available in an accessible way.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This will be more relevant to larger enterprises with well-developed governance capacity. Further indicators which are more formative than summative need to be developed for smaller, less formal and emerging organizations. These may need to include guidelines and examples. It will also be important to craft these with a good cultural fit. Transparency is not a universally held value across all cultures and some traditional societies have very proscriptive lore on information sharing.		
3. Unit of Measurement or Metric		
This is essentially qualitative and there is little to be gained from establishing a metric which might in any event distract from what is important to achieve.		
4. How to Measure		
1. The transparency policy is identified from a review of enterprise's policies and procedures 2. The enterprise can show how the policy is used and cite examples from its published works of information being available to stakeholders 3. Enterprise documents and websites have clear pathways for accessing information 4. The enterprise can explain how the information needs of stakeholders are assessed and met.		
5. Rating		
“Dark Green” score: The enterprise has a clear commitment to transparency. It has explicit and open policies to deal with requests for information. It anticipates the information stakeholders will need and makes this available in a timely and accurate manner via channels which are appropriate and accessible to its stakeholders. It regularly assesses its performance against this standard and invites stakeholders to rate the performance and comment on how this could be improved. It can show a consistent history of improvement in its transparency. Unacceptable practices (automatically lead to a “Red” SAFA score): The enterprise regularly and deliberately withholds information from key stakeholders or provides information that is not fully accurate.		
6. Limitations of the Core Indicator		
It is very difficult to establish a standard in this area and the indicator is necessarily aspirational.		
7. Sources of information		
• Five ways to make your business more transparent. http://mashable.com/2009/09/30/business-transparency/ • OECD. Why a global standard for a stronger, cleaner, fairer economy? http://www.oecd.org/corporate/whyaglobalstandardforastrongercleanerfairereconomy.htm		

Core Indicator name		
Stakeholder identification (G 3.1.1)		
Dimension Governance	Theme Participation (G 3)	Sub-theme Stakeholder Dialogue (G 3.1)
1. Description		
The enterprise pro-actively identifies stakeholders, which include all those affected by the activities of the enterprise (including any stakeholders unable to claim their rights). It can describe the process for identifying stakeholders including how asymmetries of power have been resolved and addressing any access or communications difficulties. Satisfactory stakeholder identification is a precursor to stakeholder engagement and participation.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
All enterprises should be able to identify their stakeholders and report on how these are engaged with. In larger organizations with well- developed governance processes will have cyclical as well as issue specific engagement and will keep and be able to evidence records of these. In smaller or less formal organizations this may be emergent however most organizations will have stakeholders and with assistance should be able to identify these and articulate how they are identified. The indicator may be more thoroughly understood at the marketing end of the supply chain because marketing organizations typically rely more heavily on stakeholder engagement to inform organizational direction.		
3. Unit of Measurement or Metric		
• % of stakeholders identified versus the number engaged; • % of stakeholders unable to claim their rights identified.		
4. How to Measure		
1. The enterprise can describe the processes for identifying each stakeholder group including how spokespersons are identified and endorsed and provide evidence of this. Evidence might include minutes, resolutions, invitations, photographs. 2. The enterprise supplies a list of stakeholders which identifies those for which satisfactory engagement was achieved; this list identifies vulnerable stakeholders and those unable to claim their rights. 3. A sample of stakeholders confirms the enterprise's assessment.		
5. Rating		
“Dark Green” score: The enterprise has a clear commitment to stakeholder engagement and participation. It is able to describe how it identifies stakeholders and how spokespersons are identified and endorsed. It is able to list all stakeholders and identify those who are vulnerable or ordinarily unable to claim their rights. Unacceptable practices (automatically lead to a “Red” SAFA score): • The enterprise is unable or unwilling to describe the process used for identifying stakeholders or the process of identification excludes the most vulnerable and those unable		

to claim their rights. • Less than 30% of stakeholders or less than 50% of stakeholders who are the most vulnerable and those unable to claim their rights have been identified.
6. Limitations of the Core Indicator
This is a relatively straightforward indicator which might be formative in the early stages of assessment with smaller and less formal organizations. The metrics in the measurement might be arguable as it is the process of identification which will determine how many are identified.
7. Sources of information
• Getting started: identifying stakeholders. Participation analysis. http://web.mit.edu/urbanupgrading/upgrading/issues-tools/tools/Ident-stakeholders.html • Bryson, J.M. 2004. <i>What to do when stakeholders matter. Stakeholder identification and analysis techniques</i>. Public Management Review. http://www.hhh.umn.edu/people/jmbryson/pdf/stakeholder_identification_analysis_techniques.pdf • Thompson, R. <i>Stakeholders analysis. Winning support for your projects</i>. http://www.mindtools.com/pages/article/newPPM_07.htm • Rabinowitz, P. <i>Identifying and analyzing stakeholders and their interests</i>. http://ctb.ku.edu/en/tablecontents/chapter7_section8_main.aspx

Core Indicator name		
Stakeholder engagement (G 3.1.2)		
Dimension Governance	Theme Participation (G 3)	Sub-theme Stakeholder Dialogue (G 3.1)
1. Description		
The enterprise is able to effectively engage with these stakeholders. Excellent performance in this indicator will be evidenced by engagement activities customized for stakeholder type resulting in comprehensive and mutually satisfactory engagement which is sustained over time. Engagement may take many forms and increasingly might embrace new technologies and social media as well as more traditional surveys, meetings interviews and focus groups.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
All enterprises should be able to identify their stakeholders and report on how these are engaged with. In larger enterprises with well- developed governance processes will have cyclical as well as issue specific engagement and will keep and be able to evidence records of these. In smaller or less formal enterprises this may be emergent however most organizations will have stakeholders and with assistance should be able to identify these and articulate how they are engaged. The indicator may be more thoroughly understood at the marketing end of the supply chain because marketing organizations typically rely more heavily on stakeholder engagement to inform organizational direction. Diversity of approaches for engagement will be evidence of a more sophisticated approach and mature enterprises will be able to show how different approaches have been used to increase participation from specific stakeholders.		
3. Unit of Measurement or Metric		
• Number of stakeholders identified versus the number engaged; • Numbers of stakeholders unable to claim their rights identified and engaged; • Diversity of approach identified.		
4. How to Measure		
1. Describe: The enterprise can describe the processes for engaging each stakeholder group and provide evidence of this. Evidence might include minutes, resolutions, invitations, photographs. 2. List: The enterprise's supplies a list of stakeholders which identifies those for which satisfactory engagement was achieved, This list identifies vulnerable stakeholders and those unable to claim their rights. 3. The enterprise can identify a diversity of approaches and explain how these contributed to effective engagement. 4. A sample of stakeholders confirms the organization assessment.		
5. Rating		
"Dark Green" score:		

The enterprise has a clear commitment to stakeholder engagement and participation. It has achieved satisfactory engagement with 80% of identified stakeholders including all vulnerable stakeholders and those unable to claim their rights.

Unacceptable practices (automatically lead to a “Red” SAFA score):

- The organization is unable or unwilling to describe the process used for engaging with stakeholders or the process of engagement excludes the most vulnerable and those unable to claim their rights.
- Less than 30% of stakeholders or less than 50% of stakeholders who are the most vulnerable and those unable to claim their rights have been engaged in satisfactory stakeholder engagement

6. Limitations of the Core Indicator

This is a relatively straightforward indicator which might be formative in the early stages of assessment with smaller and less formal organizations. The metrics in the measurement might be arguable.

7. Sources of information

- Engaging stakeholders in a business. <http://businesscasestudies.co.uk/cadbury-schweppes/engaging-stakeholders-in-a-business/the-importance-of-engaging-stakeholders.html#axzz2Ty4bo42q>
- Practices and principles for successful stakeholder engagement. http://www.csr-weltweit.de/uploads/tx_jdownloads/SustainAbility_Practices_and_Principles_for_successful_stakeholder_engagement.pdf
- Fraser, E.D.G., Dougill, A.J., Mabee, W.E., Reed, M. & McAlpine, P. 2006. *Bottom up and top down: analysis of participatory processes for sustainability indicator identification as a pathway to community empowerment and sustainable environmental management*. Journal of Environmental Management. <http://www.manometmaine.org/documents/FraserBottomupandTopdown2006.pdf>
- Corporate sustainability in context. <http://www.econtext.co.uk/blog/2013/03/15/using-social-media-to-engage-stakeholders/>

Core Indicator name		
Engagement barriers (G 3.1.3)		
Dimension Governance	Theme Participation (G 3)	Sub-theme Stakeholder Dialogue (G 3.1)
1. Description		
The enterprise has an understanding how asymmetries of power can prevent the engagement of vulnerable stakeholders. It has a commitment to identifying barriers to engagement for all stakeholder groups and working with those groups to overcome barriers. Barriers can include but are not limited to: knowledge/information; financial; physical; geographic; cultural; religious; linguistic/communication; and status barrier. Engagement may take many forms and increasingly might embrace new technologies and social media as well as more traditional surveys, meetings interviews and focus groups.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
An ecological approach to enterprise sees value in engagement with all stakeholders and understands the barriers to their participation. Complying organizations will have met the standards in G3.1.1 and G3.1.2. These are likely to be the larger organizations with significant Governance capacity. However the exercise of the indicator may be formative for smaller and less sophisticated organizations.		
3. Unit of Measurement or Metric		
Barriers identified versus strategies to barriers identified AND employed.		
4. How to Measure		
1. Identify: the enterprise can identify the barriers to engagement for each stakeholder group. In larger organizations these might be detailed in the stakeholders register in smaller organizations the identification will be less formal. 2. List: the enterprise can list the strategies to overcome barriers to engagement and where these have been employed. 3. A sample of stakeholders confirms the organization assessment that engagement barriers have been overcome.		
5. Rating		
“Dark Green” score: The organization has a clear commitment to stakeholder engagement and participation. It is able to identify potential barriers to engagement for stakeholders, has developed strategies to overcome these barriers, and has evidence of this being successfully employed in 80% of cases. It has process improvement plans developed or in development for the remainder. Unacceptable practices (automatically lead to a “Red” SAFA score): • Unexplained failure to identify and act upon more than two barriers; • Failure to develop and implement strategies to overcome barriers for more than 50% of identified barriers.		

6. Limitations of the Core Indicator
The % limits have not been able to be established by research and are therefore arbitrary. Results will vary across cultures and limit comparability. For example in the most developed countries organizations will have a common understanding of the need to make building accessible and this may be reinforced by laws and building regulations. In less developed countries and in particular in remote and rural areas there may be no such mores or laws.
7. Sources of information
• Grossman, J.M., Kushner, K.L. & November, A.E. 2008. <i>Creating sustainable local health information exchanges: can barriers to stakeholder participation be overcome?</i> Center for Studying Health System Change. Research Brief. http://www.hschange.org/CONTENT/970/970.pdf • Working towards more effective and sustainable brownfield revitalization policies. Stakeholder engagement – a toolkit. http://www.revit-nweurope.org/selfguidingtrail/27_Stakeholder_engagement_a_toolkit-2.pdf • EPA. 2001. <i>Stakeholder involvement & public participation at the US EPA. Lessons learned, barriers & innovative approaches.</i> http://www.epa.gov/evaluate/pdf/stakeholder/stakeholder-involvement-public-participation-at-epa.pdf

Core Indicator name		
Effective participation (G 3.1.4)		
Dimension Governance	Theme Participation (G 3)	Sub-theme Stakeholder dialogue (G 3.1)
1. Description		
Stakeholder engagement is of greatest value when an organization can incorporate the views of its stakeholders in its decision-making. Demonstrating how stakeholder engagement has influenced the organization's decisions is the test which is applied and the process of this enquiry is likely to lead to enhanced stakeholder engagement and a greater value being placed on stakeholder views. Giving stakeholders feedback about how their engagement was used and what it has changed is important to maintain trust and build the relationships that encourage proactive dialogue from stakeholders. Failure to ensure effective feedback can contribute to consultation fatigue.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Any enterprise which has genuinely engaged its stakeholders should be able to show the effect of this engagement on the organizations decisions and actions.		
3. Unit of Measurement or Metric		
Impact assessment is necessarily qualitative. While we can measure the number of stakeholder views incorporated, the true measure of performance is really how great the impact has been. This is particularly true where the incorporation of stakeholder views comes at real cost to the organization such as where a decision not to proceed with a project due to stakeholder dissatisfaction. This involves the careful balance of all the pillars of sustainability.		
4. How to Measure		
1. List the decisions which have been affected by stakeholder feedback; 2. Describe how feedback was provided to stakeholder groups on their input or feedback.		
5. Rating		
“Dark Green” score: • The enterprise is able to identify how decisions have been impacted by stakeholder engagement and has evidence (minutes, notes, source documents) of the impact; AND • the enterprise has evidence of how the impact of stakeholder engagement was communicated back to stakeholders. Unacceptable practices (automatically lead to a “Red” SAFA score): • The enterprise has not engaged stakeholders or is unable to demonstrate that its stakeholder engagement has genuinely affected the decisions it has made; • The enterprise routinely fails to inform stakeholders of the outcome of engagement.		
6. Limitations of the Core Indicator		
It is possible, although unlikely, that an organization could be genuinely engaged with its stakeholders but that the views of these stakeholders have not influenced its decisions. It is very unlikely this would happen repeatedly and would demand further inquiry.		

7. Sources of information

- EPA, 2001. Stakeholder involvement and public participation at the US EPA. Lessons learned, barriers & innovative approaches.
<http://www.epa.gov/evaluate/pdf/stakeholder/stakeholder-involvement-public-participation-at-epa.pdf>
- Australian Government. Stakeholder engagement. Practitioner handbook.
http://www.immi.gov.au/about/stakeholder-engagement/_pdf/stakeholder-engagement-practitioner-handbook.pdf
- International Finance Corporation. Stakeholder engagement: a good practice handbook for companies doing business in emerging markets.
http://www1.ifc.org/wps/wcm/connect/938f1a0048855805beacfe6a6515bb18/IFC_StakeholderEngagement.pdf?MOD=AJPERES

Core Indicator name Grievance procedures (G 3.2.1)		
Dimension Governance	Theme Participation (G 3)	Sub-theme Grievance Procedures (G 3.2)
1. Description		
Asymmetries of power can be reduced with the provision of clear, accessible and fair grievance procedures. The procedures need not be identical for all stakeholder groups but should follow the principles of natural justice and be designed to be culturally appropriate and where possible mirror processes which are familiar to and respected by the stakeholder group.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
In most enterprises, there will be some statutory requirement for some stakeholders, for example employees. The indicator is reliant on the effective identification of stakeholder groups (G3.1.1.) More sophisticated organizations and those with strong governance capacity will have well developed grievance procedures; however these need not be complex or expensive to operate and simpler systems are available to smaller or less formal organizations.		
3. Unit of Measurement or Metric		
Of importance is that procedures are available for as many stakeholders as possible but it is the operation of procedures and the satisfaction of stakeholders which is of greatest importance. This might be measured by sampling affected stakeholders to test whether they know about and are satisfied with procedures.		
4. How to Measure		
1. List the stakeholders (G3.1.1) and assess which have an available grievance procedure. 2. Canvas stakeholders to assess stakeholder satisfaction with the procedures.		
5. Rating		
“Dark Green” score: • The enterprise is able to identify grievance procedures for all affected stakeholders and these are proactively publicized. These procedures meet the standards of natural justice and are supported by stakeholders. AND • The enterprise can provide evidence that procedures are being used, data on use and reports of satisfactory resolutions. Unacceptable practices (automatically lead to a “Red” SAFA score): • The enterprise has no formal grievance procedures for any stakeholders or has procedures which do not meet the standard of natural justice. • The stakeholders overwhelmingly reject the processes used and there is widespread distrust of the procedures.		
6. Limitations of the Core Indicator		
There is some cross over with the indicator for conflict resolution G 3.3.1.		

7. Sources of information

- Grievance procedure for stakeholder issues. <http://www.nbpol.com.pg/wp-content/uploads/downloads/2011/02/Grievance-Procedure-for-Stakeholder-Issues-PNG.pdf>
- Report of the special representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, John Ruggie. UN General Assembly. <http://www.ohchr.org/Documents/Issues/Business/A-HRC-17-31-Add1.pdf>
- International Finance Corporation. 2009. Project-level grievance mechanisms for affected communities. <http://www.accountabilitycounsel.org/wp-content/uploads/2012/02/IFC%E2%80%99s-Draft-Good-Practice-Note.pdf>

Core Indicator name Conflict resolution (G 3.3.1)		
Dimension Governance	Theme Participation (G 3)	Sub-theme Conflict Resolution(G 3.3)
1. Description		
All enterprises have real or potential conflicts with their stakeholders. Conflicts can be disputes of interests where the rights of the parties are in conflict and have not been resolved or disputes of rights where the interests of the parties have been resolved but the interpretation of the rights conferred are in dispute. To achieve compliance with this indicator, organizations will need to show that conflicts of stakeholder interests with the enterprise's activities are resolved through collaborative dialogue (e.g. arbitrated, mediated, facilitated, conciliated or negotiated), based on respect, mutual understanding and equity.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
All enterprises will experience conflicts of interests because they operate in an environment where there is competition for markets and resources. Most will also experience conflicts of rights because it is difficult to be clear and explicit about the rights in each stakeholder relationship at all times. Recurrent conflicts or disputes of rights should be treated as an indicator that the organization needs to improve the standard of its communications in this area or that the dispute of interest has not been satisfactorily resolved.		
3. Unit of Measurement or Metric		
While we can and should introduce metrics around number of disputes and disputes resolved for the purposes of reporting and audit it is the qualitative work of identifying potential conflicts and ranking potential and actual conflicts which will be the most illuminating.		
4. How to Measure		
1. Identify: the enterprise can show that it proactively identifies potential conflicts of interest with and amongst its stakeholders. 2. Identify examples of <i>actual</i> conflicts, with descriptions of how they were resolved, providing evidence of (examples showing) how they were based on collaborative dialogue, and were based on values of respect, mutual understanding and equity. 3. Count: the number of identified stakeholder conflicts of interest and the number successfully resolved. Complainants are sampled to assess the degree of satisfaction.		
5. Rating		
“Dark Green” score: • All relevant stakeholder groups are identified and no unexplained obvious omissions of significant potential conflicts; • The enterprise has identified examples of <i>actual</i> conflicts, with descriptions of how they were resolved, providing evidence of (examples showing) how they were based on collaborative dialogue, and were based on values of respect, mutual understanding and equity. If no examples of conflicts of interest in last 5 years able to describe <i>how</i> you would resolve a potential conflict in this way; • The enterprise provides actual examples demonstrating collaborative dialogue and consistent		

with values of respect, mutual understanding and equity.

Unacceptable practices (automatically lead to a “Red” SAFA score):

- If identified for less than 50% of relevant stakeholders, or more than two unexplained obvious omissions;
- If cannot provide actual examples demonstrating collaborative dialogue **or** consistent with values of respect, mutual understanding and equal power; **and** cannot provide hypothetical (and realistic) scenario demonstrating collaborative dialogue **or** consistent with values of respect, mutual understanding and equal power.

6. Limitations of the Core Indicator

Many enterprises may not consider conflicts before they happen and it may take time to build proactive behavior. Procedures tend to be written following very western concepts of justice and resolution and these do not resonate well with all cultures. Care will be needed to ensure appropriate procedures are available for diverse stakeholders.

7. Sources of information

- Principles of conflict resolution. <http://www.gdrc.org/uem/conresol.html>
- Deane K.I. 2005. The principles of conflict management. <http://www.lamsquare.com/article1.htm>
- Principles for conflict resolution. Watt Works Consulting. <http://www.watt-works.com/2011/11/principles-for-conflict-resolution/>
- FAO. Trading module on conflict management. <http://www.fao.org/docrep/006/ad346e/ad346e0c.htm>
- Poolman, M., Munamati, M. & Senzanje, A. *Stakeholder and conflict analysis*. http://www.smallreservoirs.org/full/toolkit/docs/I%2002%20Stakeholder%20and%20Conflict%20Analysis_MLA.pdf

Core Indicator name Legitimacy (G 4.1.1)		
Dimension Governance	Theme Rule of Law (G.4)	Sub-theme Legitimacy (G 4.1)
1. Description		
Operational legitimacy will firstly be judged by the organizations adherence to the rule of law. Legal or regulatory breach is a significant reputational risk for the organization and it is important that the organizations governance body is fully informed and setting clear direction for management. This does not mean that the organization will always necessarily obey the rule of law but that any breach must be considered seriously at a governance level and be assessed against the organization's mission and values. Adherence to the rule of law is a minimum standard and to achieve excellence in this indicator the organization will be able to prove that it has gone beyond the rule of law by adopting and complying with applicable international voluntary codes consistent with its mission. This supra-legal initiative can be progressively adopted and its development should be included in organizational plans. For example a bake-house might decide it wants to support its “good food from good folks” motto by using fair trade ingredients but wants to adapt its product line over time, It might adopt Fair Trade standards as an aspirational goal and report to its customers and stakeholders its progress as it incorporates more Fair Trade ingredients into its baking.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Rule of law is a minimum standard and applies to all enterprises in the supply chain. Some of the voluntary codes will be less accessible to smaller enterprises and those with limited governance capacity however the inclusion in the indicator provides some guidance for development.		
3. Unit of Measurement or Metric		
In common with many governance indicators this is primarily qualitative rather than quantitative. It can however be easily measured – the following could be considered: • % of laws and regulations reported, although 100% would be needed for excellence; • How regularly the matter is reviewed at a governance level in the enterprise.		
4. How to Measure		
Using board agendas, minutes or other governance records we need to establish: • That the legal and code compliance is reported to the board. • That the legal compliance, code compliance and other potential voluntary codes are tested by the governance body against mission. • How frequently this is reviewed. • That the importance of compliance is communicated throughout the enterprise. • The enterprise will need to be able to provide evidence of due diligence to establish any pre-existing rights to land water or resources being used. In the case of natural resources this should include mapping.		

5. Rating

“Dark Green” score:

- The enterprise can provide evidence of a governance-endorsed risk management strategy in operation to ensure legal and regulatory compliance (including of any standards voluntarily entered into, and international human rights standards).
- That all laws and regulations are included in this evidence as are all codes voluntarily entered into.
- That the governance body reviews this and any codes not yet adopted which may be applicable against mission.
- That the results of the review form part of a regular monitoring report to stakeholders.

Unacceptable practices (automatically lead to a **“Red”** SAFA score):

- The enterprise is known to be in breach of laws, regulations and adopted codes but this has not been the subject of governance scrutiny.
- There is no evidence of a governance endorsed risk management strategy in operation or the strategy is seriously inadequate.

6. Limitations of the Core Indicator

A strategy of its own does not mitigate risk and this is covered in G 4.1.2. The organizations internal communication and command structures are relied upon in this indicator and these may be weaker in organizations with great geographical spread particularly where parts of the organization are operating under different jurisdictions and cultures.

7. Sources of information

- *Governance, risk and compliance framework*. Metric Stream White Papers.
http://www.metricstream.com/whitepapers/html/GRC_frame.htm
- Deloitte. *The risk intelligent general counsel. Discard the compass and get a GPS*.
http://www.corpgov.deloitte.com/binary/com.epicentric.contentmanagement.servlet.ContentDeliveryServlet/USEng/Documents/Audit%20Committee/Risk%20Oversight/Risk%20Intelligent%20General%20Counsel_Deloitte_102412.pdf
- The role of governance, risk management and compliance in organizations. 2011
<http://www.emc.com/collateral/about/news/ponemon-report-egrc.pdf>

Core Indicator name		
Remedy, restoration and prevention (G 4.2.1)		
Dimension Governance	Theme Rule of Law (G.4)	Sub-theme Remedy, Restoration, and Prevention (G 4.2)
1. Description		
Operational legitimacy will firstly be judged by the enterprises' adherence to the rule of law and its ability to promptly remedy any breach, restore or compensate the effects of any breach and put in place mechanisms to prevent any future breach. The same regime applies to less sanctioned rules such as local or national regulations and voluntary codes to which the organization may subscribe or support and should be applied to international human rights standards. While it is ideal for any remedy to be applied immediately this is not always practicable where significant investigation is required organizations will need to show that there is no undue delay in any of the remedies, restorations or compensations and implementation of preventative measures in order to fully comply with the standard.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Rule of law is a minimum standard and applies to all organizations in the supply chain. All organizations should have an understanding and plan for how to comply with and respond to breaches of laws, regulations, international human rights standards and voluntary codes. Compliance with environmental standards, labor rights and food safety in particular cannot be treated as optional behaviors in any enterprise.		
3. Unit of Measurement or Metric		
In common with many governance indicators this is primarily qualitative rather than quantitative. It can however be easily measured – the following could be considered: • % of law, regulatory, international human rights or voluntary code breaches satisfactorily remedied and restored or compensated and having preventative measures in place but the numbers would not reflect the qualitative impact of the breaches. For example nine minor traffic infringements may have been resolved and one major toxic spill not. The metric would show 90% compliance but the impact on the enterprise, its reputation, stakeholders and the environment could be catastrophic.		
4. How to Measure		
Using board agendas, minutes or other governance records we need to establish: • That any breaches of the law, regulation, international human rights or voluntary codes are recorded and reported to the board. Evidence, board reports and minutes. • That these breaches have been examined and that the enterprise has records of how they were promptly dealt with including: how the breach was remedied; how the effects were restored or compensated and how the adequacy of this restoration or compensation was tested; the policy and process changes that have been instituted to prevent a further breach.		
5. Rating		
“Dark Green” score:		

- The enterprise can provide evidence of the prompt remedy, restoration or compensation and action to prevent further breach;
- A review with any affected stakeholder confirms the adequacy of restoration or compensation arising from any breach.

Unacceptable practices (automatically lead to a “Red” SAFA score):

- The enterprise is known to be in breach of laws, regulations and adopted codes but has no evidence that these have been satisfactorily remedied;
- The enterprise has failed to restore or compensate a significant breach.

6. Limitations of the Core Indicator

Enterprises may begin to address this indicator only when a breach has occurred it needs to be read in conjunction with the earlier prevention strategies (G 4.1) and emphasis needs to be placed on the policies and processes developed and implemented to prevent further breaches. Compliance will become complicated where breaches are highly contested.

7. Sources of information

- *Governance, risk and compliance framework*. Metric Stream White Papers.
http://www.metricstream.com/whitepapers/html/GRC_frame.htm
- The role of governance, risk management and compliance in organizations. 2011
<http://www.emc.com/collateral/about/news/ponemon-report-egrc.pdf>

Core Indicator name Civic responsibility (G 4.3.1)		
Dimension Governance	Theme Rule of Law (G 4)	Sub-theme Civic Responsibility (G 4.3)
1. Description		
Enterprises in the food supply chain include very powerful global and national businesses. To achieve excellence in this indicator organizations will need to show that they proactively use that power responsibly and on behalf of the least powerful stakeholders and those who cannot claim their rights. A sustainable food supply chain will be achieved when all parts of the supply chain are free from exploitation of individuals, communities and the environment across all four dimensions of sustainability. Enterprises involved directly or indirectly engaged in activities which seek to reduce the rights of less powerful stakeholders and those who cannot claim their rights will not meet this indicator.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Large enterprises and organizations representing them can and do become involved in representations and lobbying to influence laws, regulations, international human rights and voluntary codes. For example some enterprises have been involved in lobbying for lower legal minimum wages. Others have sought to reassure their customers that their products are free from exploitation by adopting voluntary codes and become actively involved in promoting and improving these codes. This indicator will primarily apply to larger enterprises and those with strong commitment to sustainability principles.		
3. Unit of Measurement or Metric		
In common with many governance indicators this is primarily qualitative rather than quantitative. There may be some value internally in tracking expenditure on lobbying but it is unlikely to yield a useful metric.		
4. How to Measure		
Using board agendas, minutes or other governance records we need to establish • A register of all peak bodies or lobbying groups to which the organization belongs. • Records of any lobbying direct or indirect in which the organization seeks to influence laws, regulations, international human rights codes or other voluntary codes. • Testing these activities against mission and against the interests of the least powerful and those who cannot claim their rights. • Where evidence of lobbying is found. The impact of this is tested by seeking the views of affected stakeholders.		
5. Rating		
“Dark Green” score: • The enterprise has clear records or register of all groups of which it is a member or supports which are involved in activities which seek to influence laws, regulations, international human rights codes or voluntary codes.		

- Examination of the records shows no activities directly or indirectly by the enterprise to reduce the coverage or impact of these laws, regulations, international human rights codes and voluntary codes.
- Where evidence is found of lobbying, the affected stakeholders have been consulted and support the activities.

Unacceptable practices (automatically lead to a “Red” SAFA score):

- The enterprise is found to support organizations who have been lobbying to influence laws, regulations, human rights codes and voluntary codes against the interests of the least powerful and those stakeholders who cannot claim their rights.
- The governance body has not been informed or directed the lobbying efforts of the enterprise or its agents.
- Lobbying is not conducted in an open and transparent manner and attempts are made by the enterprise to disguise its lobbying activities.

6. Limitations of the Core Indicator

This could be burdensome for very small enterprises who are members of large peak bodies but have little practical ability to influence these.

7. Sources of information

- Watson, E. 2013. *Lobbying by agri-business killed New Mexico GMO labelling Bill, claim supporters*. <http://www.foodnavigator-usa.com/Regulation/Lobbying-by-agri-business-killed-New-Mexico-GMO-labeling-Bill-claim-supporters>
- Spolar, C. & Eaton, J. 2010. Food lobby mobilizes, as soda tax bubbles up. HuffPost Investigative Fund. http://www.huffingtonpost.com/2009/11/04/soda-tax-mobilizes-food-l_n_345840.html

Core Indicator name		
Free, prior and informed consent (G 4.4.1)		
Dimension Governance	Theme Rule of Law (G 4)	Sub-theme Resource Appropriation(G 4.4)
1. Description		
An enterprise will have its reputation compromised and may suffer in the market if it reduces the existing rights of communities to land, water and resources particularly if the livelihoods of the communities have been reduced. The principles of Free Prior and Informed Consent (FPIC) have been developed through extensive consultation to protect communities from unscrupulous resource exploitation and misappropriation. They also provide guidance for enterprises on how to work fairly with communities and some degree of protection to the organizations reputation. Critical to the effective operation of PFIC is the ability for an affected community to be informed. This includes the provision of information; independent advice and the capacity to self- organize for the purposes of representation.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The loss of lands, access to water and biodiversity resources is now a matter of global concern. This is particularly true in the food supply system with large scale transfers of agricultural land. It has relevance for all organizations across the food supply chain and failure to follow FPIC principles is a serious governance risk.		
3. Unit of Measurement or Metric		
In common with many governance indicators this is primarily qualitative rather than quantitative, based on the implementation of FPIC principles.		
4. How to Measure		
- The enterprise will need to be able to provide evidence of due diligence to establish any pre-existing rights to land water or resources being used. In the case of natural resources this should include mapping. - The enterprise should have incorporated the principles of FPIC into its governance policy. - It needs to be able to provide evidence that each of the principles of FPIC has been addressed to the satisfaction of affected stakeholders.		
5. Rating		
“Dark Green” score: - The enterprise can demonstrate awareness of stakeholder’s pre-existing access to land, water and biodiversity resources, by community asset mapping or other equivalent process. - Has evidence of satisfying the standard and its stakeholders in respect of the principles of FPIC. - Has evidence it recognizes any asymmetries of power between itself and affected communities and that it has worked to ensure communities are well represented in any negotiations. Unacceptable practices (automatically lead to a “Red” SAFA score) - Not all 3 components of FPIC are addressed for all affected stakeholders or there is any evidence of deceit or deception in the process.		

6. Limitations of the Core Indicator

Because it is so situation specific it is difficult to compare performance fairly across organizations.

7. Sources of information

- Forest People Programme. *Free, prior and informed consent (FPIC)*. <http://www.forestpeoples.org/guiding-principles/free-prior-and-informed-consent-fpic>
- Cultural Survival. *Free, prior and informed consent initiative: building informed and organized indigenous communities*. <http://www.culturalsurvival.org/consent>
- BSR, 2012. *Engaging with free, prior and informed consent*. http://www.bsr.org/reports/BSR_Engaging_With_FPIC.pdf
- FAO, 2009. *Land grab or development opportunity? Agricultural investment and international land deals in Africa*. <http://www.fao.org/docrep/011/ak241e/ak241e00.htm>

Core Indicator name Tenure rights (G 4.4.2)		
Dimension Governance	Theme Rule of Law (G 4)	Sub-theme Resource Appropriation(G 4.4)
1. Description		
Tenure systems define and regulate how people, communities and others gain access to natural resources, whether through formal law or informal arrangements. The rules of tenure determine who can use which resources, for how long, and under what conditions. They may be based on written policies and laws, as well as on unwritten customs and practices. The responsible governance of tenure ensures access to land fisheries and forests are equitably shared. It protects economically and socially marginalized people from alienation from the resources they need to live. Weak governance of tenure is also associated with the over exploitation of natural resources and consequential environmental degradation.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The loss of lands, access to water and biodiversity resources is now a matter of global concern. This is particularly true in the food supply system with large scale transfers of agricultural land. It has relevance for all enterprises across the food supply chain.		
3. Unit of Measurement or Metric		
In common with many governance indicators, this is primarily qualitative rather than quantitative, based on the degree of implementation of the Voluntary Guidelines of Tenure. Key principles including transparency, recording and valuing tenure rights, acting with due diligence to prevent infringing tenure rights and co-operating to remedy any breach of tenure rights must be met.		
4. How to Measure		
Enterprise governance records are reviewed and key staff interviewed.		
5. Rating		
“Dark Green” score: - The enterprise has a record of all transactions related to tenure rights and can show clearly all the principles of the voluntary code are met. Where there has been any breach or alleged breach of tender rights the enterprise can prove that it has fully and promptly co-operated with any inquiry and remedy process to the satisfaction of affected parties. Unacceptable practices (automatically lead to a “Red” SAFA score) - The enterprise has no records of any due diligence over tenure rights and or has repeatedly been involved in disputes over a breach of tenure rights. It has failed to remedy tenure rights breaches with its stakeholders.		
6. Limitations of the Core Indicator		
Breaches are often only discovered where the affected party is able to raise a dispute. Where the affected party has limited rights or no spokesperson in the case of unclaimed yet exploited natural resources the breach may continue without being raised and therefore made visible.		
7. Sources of information		
FAO, 2012. Voluntary guidelines on the responsible governance of tenure: http://www.fao.org/nr/tenure/voluntary-guidelines/en/		

Core Indicator name		
Sustainability management plan (G 5.1.1)		
Dimension Governance	Theme Holistic Management (G 5)	Sub-theme Sustainability Management Plan (G 5.1)
1. Description		
Sustainability plans are a relatively recent phenomenon used by an organization to provide good governance guidance for its sustainability efforts and to assist in incorporating the values and aspirations for sustainability to be formally included in business planning. The business planning cycle enables governance bodies to hold management accountable for implementing the direction and targets set for the organization. Sustainability planning is rapidly becoming the norm in western business. With one report showing an increase in American businesses having or developing such plans from 38% in 2011 to 64% in 2013 however there is a need to ensure these plans are holistic and cover each of the four pillars of sustainability.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Larger enterprises and organizations are increasingly doing sustainability plans as the norm. Some who have been doing these for many years are reporting significant cost savings as a result. Simpler and introductory templates are now available for smaller enterprises and community development leaders are developing processes for less literate groups. While the plan itself is important as evidence of a proactive and integrated approach to sustainability it is also important to be able to show the values informing better decision-making.		
3. Unit of Measurement or Metric		
In common with many governance indicators this is primarily qualitative rather than quantitative. It could be appropriate to help measure internal progress by tracking the extent of the plan and in particular to note that all four sustainability dimensions are covered; environmental, social, economic and governance.		
4. How to Measure		
Using board agendas, minutes or other governance records we need to establish: • A formal sustainability plan. • Evidence via case studies of how the plan or the values embodied in it are helping the enterprise make sound decisions to improve their operations in a sustainable way. • Evidence that each of the four dimensions of sustainability is addressed by the plan.		
5. Rating		
“Dark Green” score: • The organizational has a formal sustainability plan endorsed by the governance body. • The organization is able to provide evidence of the plan or values in it being used to improve the sustainability of the organizations operations as a result of better decision-making. • The plan covers each of the pillars of sustainability. Unacceptable practices (automatically lead to a “Red” SAFA score): • The organization has no sustainability plan.		

• The organization cannot articulate the values and aspirations a plan might address. • The plan does not address each of the sustainability pillars.
6. Limitations of the Core Indicator
This indicator is rather binary, either you have a plan or you don't and needs to have some graduation of score to encourage the development of plans.
7. Sources of information
• Sample Sustainability Plan. http://www.nationalserviceresources.org/filemanager/download/online/sustainability_plan.pdf • <i>Corporate sustainability plans 'almost double year-on-year'</i>. Environmental Leader News. http://www.environmentalleader.com/2013/01/04/corporate-sustainability-plans-almost-double-year-on-year/ • 2012 Tork Report: the sustainability gap. http://www.torkusa.com/Global/6_North_America/Tork%20Report/Tork%20Report%20Web%202012.pdf • <i>Business sustainability – implementing a sustainability plan at your company</i>. The University of Vermont. http://www.universityofvermontonline.com/implementing-a-sustainability-plan-at-your-company/

Core Indicator name		
Full-cost accounting (G 5.2.1)		
Dimension Governance	Theme Holistic Management (G 5)	Sub-theme Full-cost Accounting (G 5.2)
1. Description		
Traditional accounting systems deal predominately in actual \$ costs in the current year. Matters outside of this particularly where the \$ cost is difficult to determine or has not been valued are treated as externalities (matters outside the business equation). As consumers, stockholders and other stakeholders become more aware and concerned about the potential environmental and social impacts of business they are demanding better information about the organizations performance in these areas. This movement began as “Triple bottom line” reporting, demanding that an organizations performance needs to be assessed in economic, social and environmental terms. Reporting performance through financial accounts is the most established method by which stakeholders judge the performance of a business so it is unsurprising that there is now change and calls for more change in how accounting represents the full performance and impact of an enterprise. Movements such as triple bottom line reporting, Social auditing and environmental accounting have all contributed to an emerging field of work which seeks to improve the accuracy and use of Full-cost Accounting. It is thought these initiatives will enable organizations to make better decisions because they more fully understand the full impact of these decisions. For example understanding the opportunity cost in environmental and reputational terms may enable an organization to justify a more responsible yet more expensive (in strictly present \$ terms) business process. The full-cost accounting process makes transparent both direct and indirect subsidies received as well as direct and indirect costs externalized. There is not yet an international consensus on an all encompassing standard for FCA however very sound work is emerging with comparable tools for some aspects of the accounts for example measuring an organization’s carbon footprint.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Full-cost Accounting is an emerging field. It will be more relevant for the champions of sustainability and those organizations prepared to invest to develop systems. Over time it is likely the principles will become more accessible to smaller organizations particularly as open source or low cost web based tools are developed. One area where small formal groups may be ahead is in where these are using some of the low technology collaborative tools developed by NGOs to inform decision-making about rural labour and resource use.		
3. Unit of Measurement or Metric		
Because there is, as yet, no universal FCA standards this indicator cannot be usefully metricized for the purposes of external comparison. Progress towards a FCA approach can be measured but the progress will inevitably be subjective because there is no complete standard against which to measure. Moreover as understanding of social and environmental impacts grow so will the capacity to include these in accounts. This elasticity will render progress metrics unreliable.		

4. How to Measure

Using Governance reporting records we need to establish:

- That the enterprise is collecting, analyzing and reporting data on each of its economic, social and environmental performance and impacts.
- The enterprise can show these reports are available to stakeholders.
- The enterprise can describe how it plans to improve its FCA reporting, the obstacles it has faced and how it plans to overcome these.

5. Rating

“Dark Green” score:

- The enterprise has evidence that it collects, analysis and reports to its stakeholders on its economic, social and environmental impacts and performance.
- The enterprise shows it understands the emerging discipline of FCA and is actively involved in improving the scope and validity of its FCA reporting.

Unacceptable practices (automatically lead to a **“Red”** SAFA score):

- The enterprise does not account for its impact and performance using any FCA regime.
- The enterprise has significant costs visited on the environment and community which are externalized from its accounting systems.
- The enterprise has FCA reports which are cannot be validated.

6. Limitations of the Core Indicator

As an emerging field the indicator will become more useful over time. At this point it is probably formative rather than summative for all but the largest organizations or those with very strong commitment to sustainability and good governance.

7. Sources of information

- IISD. *Full cost accounting for agriculture- final report. Valuing public benefits accruing from agricultural beneficial management practices: an impact pathway analysis for Tobacco Creek, Manitoba.* http://www.iisd.org/pdf/2008/measure_fca_2008.pdf
- EPA. 1996. *Full cost accounting resource guide.* <http://webapp1.dlib.indiana.edu/cgi-bin/virtcdlib/index.cgi/5035611/FID1/Pdfs/fca-guid.pdf%3B1>
- Ali Almihoub, A.A. *et al.* 2013. *Are there effective accounting ways to determining accurate accounting tools and methods to reporting emissions reduction?* Journal of Sustainable Development 6(4). www.ccsenet.org/journal/index.php/jsd/article/download/23340/16070
- Participatory Rural Appraisal (PRA). [http://www.kstoolkit.org/Participatory+Rural+Appraisal+\(PRA\)](http://www.kstoolkit.org/Participatory+Rural+Appraisal+(PRA))
- The sustainability reporting framework. <https://www.globalreporting.org/reporting/reporting-framework-overview/Pages/default.aspx>

SAFA ENVIRONMENTAL CORE INDICATORS – OVERVIEW AND FULL EXPLANATIONS

Dimension E: ENVIRONMENTAL INTEGRITY		
Themes	Sub-themes	Core Indicators
E1 Atmosphere	E 1.1 Greenhouse Gases	E 1.1.1 GHG reduction target
		E 1.1.2 GHG mitigation practices
		E 1.1.3 GHG balance
	E 1.2 Air Quality	E 1.2.1 Air pollution reduction target
		E 1.2.2 Air pollution prevention practices
		E 1.2.3 Ambient concentration of air pollutants
E2 Water	E 2.1 Water Withdrawal	E 2.1.1 Water conservation target
		E 2.1.2 Water conservation practices
		E 2.1.3 Ground and surface water withdrawals
	E. 2.2 Water Quality	E 2.2.1 Clean water target
		E 2.2.2 Water pollution prevention practices
		E 2.2.3 Concentration of water pollutants
		E 2.2.4 Wastewater quality
E3 Land	E 3.1 Soil Quality	E 3.1.1 Soil- improvement practices
		E 3.1.2 Soil physical structure
		E 3.1.3 Soil chemical quality
		E 3.1.4 Soil biological quality
		E 3.1.5 Soil organic matter content
	E 3.2 Land Degradation	E 3.2.1 Land conservation and rehabilitation plan
		E 3.2.2 Land conservation and rehabilitation practices
E4 Biodiversity	E 4. 1 Ecosystem Diversity	E 4.1.1. Landscape/marine habitat conservation plan
		E 4.1.2 Ecosystem-enhancing practices
		E 4.1.3 Structural diversity of ecosystems
		E 4.1.4 Ecosystem connectivity
		E 4.1.5 Land–use and land-cover change
	E 4.2 Species Diversity	E 4.2.1 Species conservation target
		E 4.2.2 Species conservation practices
		E 4.2.3 Diversity and abundance of key species
		E 4.2.4 Diversity of production
	E. 4.3 Genetic Diversity	E 4.3.1 Wild genetic diversity enhancing practices
		E 4.3.2 Agro-biodiversity in-situ conservation
		E 4.3.3 Locally adapted varieties/breeds
		E 4.3.4 Genetic diversity in wild species
		E 4.3.5 Saving of seeds and breeds

E5 Materials and Energy	E 5.1 Material Use	E 5.1.1 Material consumption practices
		E 5.1.2 Nutrient balances
		E 5.1.3 Renewable and recycled materials
		E 5.1.4 Intensity of material use
	E 5.2 Energy Use	E 5.2.1 Renewable energy use target
		E 5.2.2 Energy-saving practices
		E 5.2.3 Energy consumption
		E 5.2.4 Renewable energies
	E 5.3 Waste Reduction and Disposal	E 5.3.1 Waste reduction target
		E 5.3.2 Waste reduction practices
		E 5.3.3 Waste disposal
		E 5.3.4 Food loss and waste reduction
E6 Animal Welfare	E 6.1 Health and Freedom from Stress	E 6.1.1 Integrated animal health practices
		E 6.1.2 Humane animal handling practices
		E 6.1.3 Species-appropriate animal husbandry
		E 6.1.4 Freedom from stress
		E 6.1.5 Animal health

Core Indicator Name		
GHG reduction target (E 1.1.1)		
Dimension Environmental Integrity	Theme Atmosphere (E 1)	Sub-theme Greenhouse Gases (E 1.1)
1. Description		
GHG reduction target refers to having a written plan that sets a measurable and binding goal in achieving a decrease of GHG emissions compared with baseline levels (as identified by the operation). The target could be phrased in percentage, total absolute amounts, or in per unit of production.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes. Small-scale enterprises may or may not have a written GHG reduction target, thus they may opt to omit this indicator.		
3. Unit of Measurement or Metric		
This indicator asks whether the enterprise has set a target in reducing GHG emissions in the analyzed enterprise's operations during the analyzed time-frame.		
4. How to Measure		
Determine if the enterprise has a written and binding plan – available to all stakeholders - that includes a target for the reduction of GHG emissions with exact steps in how that could be achieved within the expected time-frame. Ideally, the target should not only refer to the reduction of emissions on the enterprise's sites (including emissions from energy) and from land use and land cover change directly under the control of the enterprise, but should also include indirect emissions (e.g. production of inputs).		
5. Rating		
YES (= Dark Green) answer is given if: - the enterprise has a written plan, available to all stakeholders, with GHG emission targets; AND - steps have been already implemented towards achieving that objective. PARTIAL (= Yellow) answer is given either if: - the enterprise has a plan with a set target for the reduction of GHG emissions , but no steps have been yet made towards achieving that objective OR - the enterprise has a target and has been implementing steps towards reducing GHG emissions, however this has not been put into writing OR - the enterprise has a plan with a set target for the reduction of GHG emissions, and steps have been yet made towards achieving that objective, however the plan is not available for all of the stakeholders. NO (= Red) answer is given if none of the above requirements have been met as yet.		
6. Limitations of the indicator		
Enterprises may have a target referring to a very long-term perspective (e.g. 2050) making it difficult to monitor whether steps have been made each year towards the reduction of emissions. Utilizing the next two indicators, in conjunction with this one, helps overcoming this limitation.		
7. Sources of information		
IPCC GHG Reporting Guidelines		

Core Indicator Name		
GHG mitigation practices (E 1.1.2)		
Dimension Environmental Integrity	Theme Atmosphere (E 1)	Sub-theme Greenhouse Gases (E 1.1)
1. Description		
This indicator refers to all practices that aim at reducing the GHG emissions from food and agriculture systems. Many practices can potentially mitigate emissions, such as improved livestock and manure management, improved cropland management, restoration of degraded lands, water and rice management, etc. Resource-efficient practices that reduce the need for fossil-based fuels and for nitrogen fertilizers, or that reduce the methane emissions of ruminants can help reduce GHG emissions as well.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes.		
3. Unit of Measurement or Metric		
This indicator intends to capture the type of activities and practices that the enterprise has implemented which have effectively reduced the GHG emissions in the analyzed enterprise's operations during the analyzed time-frame. The activities – when applicable and feasible – have to be practiced on the entire enterprise site.		
4. How to Measure		
1. First decide which of below <i>examples</i> of “best practices” have been already implemented on the entire enterprise (if applicable and feasible). The enterprise may enlist additional practices with high mitigation potential. 2. Next decide with which of the “unacceptable practices” - listed below - the enterprise has been engaged with. The score for this indicator should be “Red” if any of the enlisted “worst practices” is used, regardless of also having implemented some of the “best practices”.		
5. Rating		
Best practices (= Dark Green) in GHG emissions in the food and agriculture sector are those which: 1) increase efficiencies of fossil-fuel based inputs; 2) add components of land use change that achieve neutrality in GHG emissions; and 3) sequester on-site to achieve a negative net emissions. Examples of best practices are (not exclusively) the implementation of as many of the following as feasible: <u>Cropland management</u> • Soil fertility management with organic materials and improved fertilizer application timing; • Extended crop rotations, use of cover crops, and avoidance of using bare fallows; • Land-cover change to more complex and diverse systems, e.g. agroforestry, mixed crop-livestock systems, mixed rice-fish system, SRI, intercropping, perennials, forest gardens, etc. • Soil and water conservation measures, e.g. soil or stone bunds, drainage measures, swales, water harvesting, low-energy irrigation (if used); • Reduced/zero tillage and incorporation of residues; • Engines are regularly serviced and suitable (i.e. lowest-powered) tractors/machinery is used; • The efficiency of fixed equipment is maintained, e.g. grain driers, refrigerated stores and bulk		

milk tanks;

- Installed thermal screens in glasshouses and polythene covered structures;
- Use of non-fossil fuel sources of energy;
- Water conservation techniques and water management in paddies;
- Restoration of degraded lands and/or drained organic soils;

Pasture and grazing management

- Manure treatment (e.g. recovery of methane from lagoons)
- Controlled intensity and timing of grazing (e.g. stocking rate management, rotational grazing of livestock with improved genetic and nutritional management)
- Seeding fodder grasses or legumes with higher productivity and deeper roots;
- Slurry is treated in controlled anaerobic digestion process;

Fisheries and aquaculture

- Switching to more efficient vessels or gears, such as from single to twin trawls, sails

Forestry

- Improved practices that reduce forest degradation;
- Afforestation;

Processing and marketing:

- Engines are regularly serviced and suitable (i.e. lowest-powered) tractors/machinery is used;
- The efficiency of fixed equipment is maintained, e.g. grain driers, refrigerated stores and bulk milk tanks;
- Use of non-fossil fuel sources of energy.

Unacceptable (=Red) if ANY of the following is practiced:

- Draining organic soils for cultivation;
- Creation of open-air lagoons from slurry;
- Application of high rates of nitrogen fertilizer;
- Overgrazing or high stocking rates;
- Land-use changes that reduce ecosystem soil C stocks (e.g. deforestation, ploughing up long-term grasslands);
- Use of large-scale annual monocultures;
- Slash-and-burn or burning of residues

6. Limitations of the indicator

Consensus on best practices for dealing with these challenges do not yet exist. Some practices, such as dairy cow diets that are poor in fiber and thus reduce methane emissions, can be linked with other SAFA themes, in this case Animal welfare, via trade-offs.

7. Sources of information

- Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Core Writing Team, Pachauri, R.K. and Reisinger, A. (Eds.) IPCC, Geneva, Switzerland.
- Smith P. *et. al.*, 2008. Greenhouse gas mitigation in agriculture. *Phil. Trans. R. Soc. B* 27

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- Daw, T. *et al.*, 2009. Climate change and capture fisheries: potential impacts, adaptation and mitigation. In K. Cochrane, C. De Young, D. Soto and T. Bahri (eds). *Climate change implications for fisheries and aquaculture: overview of current scientific knowledge. FAO Fisheries and Aquaculture Technical Paper*. No. 530. Rome, FAO. pp.107-150.

Core Indicator Name GHG balance (E 1.1.3)		
Dimension Environmental Integrity	Theme Atmosphere (E 1)	Sub-theme Greenhouse Gases (E 1.1)
1. Description		
GHG balance refers to the difference between the direct (and indirect) GHG emissions and the on-site sequestration by the enterprise. Direct GHG emissions are emissions from sources that are owned or controlled by the enterprise. On-site sequestration refers to practices such as afforestation and enrichment of soils with soil carbon on the sites of the enterprise.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes. However, small-scale enterprises most probably are unable to calculate the GHG balance, thus they may omit this indicator.		
3. Unit of Measurement or Metric		
This indicator measures the balance between direct GHG emissions and on-site carbon sequestration (both expressed as ton CO₂- equivalent) in the analyzed enterprise's operations during the analyzed time-frame.		
4. How to Measure		
The general approach for calculating GHG emissions and/or removals is to apply the simple formula: $B_n = E - R$, where B_n is the net balance, E is emissions, and R removals. Both emissions and removals can be computed as the product of an activity data times an emission factor, $A * EF$. Activity data A are any activities or objects that can emit GHG or sequester carbon (e.g. animal numbers; area of cultivated land; area of land use change, for instance forest cleared, etc.). Default values for emission factors, valid either globally or regionally for all key activities, can be derived from the IPCC Guidelines on National GHG Inventories (IPCC, 1996; 2000; 2003; 2006. See: http://www.ipcc-nggip.iges.or.jp/). Additional EF values can be found on IPCC's Emission Factor Data Base (http://www.ipcc-nggip.iges.or.jp/EFDB/main.php). Several tools exist that support such calculations, including one recently developed by FAO and freely available in FAOSTAT (See a partial list of tools under "Sources" below). You will need to quantify the activities and objects. For CO₂ emissions: burning of carbon-based fuels (e.g. for transport, vessels, tillage), emissions arising from land use and land use change (e.g., draining of peatland, burning of forest land and peat; deforestation). For CH₄ emissions: Ruminants, manure management, and rice cultivation. For N₂O emissions: Nitrogen inputs into soils and manure management. For removals: afforestation and enhancement of soil organic matter through tillage practices, as well as any land use change resulting in increased storage of carbon above or below ground. The minimum boundaries of the assessment are: 1) direct emissions on the operation's sites (including emissions from equipment and energy, as well as non-mechanical sources) and 2) emissions from land use change directly under the control of the operations. If the operation can quantify indirect emissions (e.g., transport, feed production, fertilizer production, land-use change related to input and feed production, etc.) those should be included as well. If indirect emissions cannot be quantified, the likely hotspot areas should be identified and the rating should take these potential emissions into account.		

Sequestration on-site is preferred over removal activities off-site, including purchase of offsets from a third party.

When reporting emissions, make sure to either report yearly values from land use changes over a period of time (usually 20 years; in such case, 1/20th of the overall loss or gain has to be reported for the entire period after the activity has taken place) or report the entire emissions/removals at once, at the time of the event.

5. Rating

Dark Green is given if the enterprise's net emissions are negative (i.e. sequestration on-site is more than total emissions).

Red is given if the enterprise's emissions are positive AND are showing an increasing trend (i.e. emissions are greater than sequestration and emissions have increased during the last year/last assessed time).

6. Limitations of the indicator

Accounting for the GHG emissions from equipment and machinery on farms is relatively straightforward. But the emissions from non-mechanical sources, such as soils and livestock, are more challenging. Specific challenges include the variability in GHG emission rates over time and space, the difficulty in disentangling the effects of current management practices on GHG emissions from those caused by natural factors, and the reversibility of carbon stocks and the long time scales over which carbon stocks change.

There is scientific uncertainty about the quantification of soil processes that lead to GHG emissions and carbon sequestration. Thus, a substantial error margin should be assumed when interpreting GHG balances.

7. Sources of information

- [FAOSTAT Emissions Agriculture database: http://faostat.fao.org/site/705/default.aspx](http://faostat.fao.org/site/705/default.aspx)
- [FAOSTAT Emissions Land Use database: http://faostat.fao.org/site/706/default.aspx](http://faostat.fao.org/site/706/default.aspx)
- EX-ACT Tool of FAO: <http://www.fao.org/tc/exact/en/>
- Cool Farm Tool: www.coolfarmtool.org
- IPCC Task Force on National Greenhouse Gas Inventories: www.ipcc-nggip.iges.or.jp
- IPCC Emission Factor DataBase: www.ipcc-nggip.iges.or.jp/EFDB/main.php
- Greenhouse Gas Protocol: www.ghgprotocol.org/
- ISO 14064-1:2006: www.iso.org/iso/catalogue_detail?csnumber=38381

Core Indicator Name		
Air pollution reduction target (E 1.2.1)		
Dimension	Theme	Sub-theme
Environmental Integrity	Atmosphere (E1)	Air Quality (E 1.2)

1. Description
Air pollution reduction target serves to check the presence of a written plan that sets a measurable and binding target for the reduction and prevention of air pollution by the analyzed enterprise. Air pollutants include sulfuric and nitrous oxides, Volatile Organic Compounds (VOC) and particulate matter (PM), ammonia, carbon monoxide, odor, smoke, emissions of pathogens and of ozone-depleting substances (e.g. chlorofluorocarbons). The air pollution reduction target can be phrased as a percentage, in total absolute amounts, or per unit of production.
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes that produce potentially polluting gaseous emissions. Small-scale enterprises that do not produce potentially polluting gaseous emissions may omit this indicator.
3. Unit of Measurement or Metric
This indicator serves to find out whether the enterprise has set targets for reducing the release of air pollutants from its operations during the analyzed time-frame. The target has to include (non-greenhouse gas) emissions resulting from land use and land cover change (e.g. burning of fields) if these occurred during the last 20 years.
4. How to Measure
1. First, each production site of the enterprise where pollutant emissions can potentially occur needs to be screened for the types of pollutants it can emit. 2. Then, determine for the concerned sites whether the enterprise has a written plan – available to all stakeholders - that includes measurable and binding targets for the reduction and prevention of air pollutant emissions with exact steps that outline how these targets can be achieved within the expected time-frame.
5. Rating
YES (= Dark Green) answer is given if: the enterprise has a written plan, available to all stakeholders, with binding air pollution reduction and prevention targets; AND steps have been implemented towards achieving the targets. PARTIAL (= Yellow) answer is given either if: the enterprise has a plan with set targets for the reduction and prevention of air pollution, but no steps have been made towards achieving the targets OR the enterprise has targets and has implemented steps for reducing and preventing air pollution, however this has not been put into writing OR the enterprise has a plan with set targets for the reduction of air pollution, and steps have been

made towards achieving the targets, however the plan is not available to all stakeholders.

NO (= **Red**) answer is given if none of the above requirements have been met yet.

6. Limitations of the indicator

Enterprises may have a target referring to a very long-term perspective (e.g. 2050) making it difficult to monitor whether steps have been made each year towards the reduction of emissions. Utilizing the next two indicators, in conjunction with this one, helps overcoming this limitation.

7. Sources of information

- World Health Organization (WHO). Air quality and health.
www.who.int/mediacentre/factsheets/fs313/en/ (includes a link to the 2005 WHO Air quality guidelines).
- United Nations Economic Commission for Europe (UNECE). The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone.
www.unece.org/env/lrtap/multi_h1.html
- European Environment Agency. Air pollution. www.eea.europa.eu/themes/air
- Aneja *et al.*, 2009. Effects of Agriculture upon the Air Quality and Climate: Research, Policy and Regulation. *Environ. Sci. Technol.* 2009, 43, 4234–424:
<http://pubs.acs.org/doi/pdf/10.1021/es8024403>

Core Indicator Name		
Air pollution prevention practices (E 1.2.2)		
Dimension	Theme	Sub-theme
Environmental Integrity	Atmosphere (E 1)	Air Quality (E 1.2)

1. Description
This indicator refers to all practices that aim at preventing the release of air pollutants from agriculture-based food chains. Air pollution derives from different sources, such as (i) biological air pollution (pollen, small insects, bacteria, fungi, yeasts and algae); (ii) physical air pollution (sound, smell, thermal pollution and radioactive radiation); and (iii) chemical air pollution (ground-level and stratospheric ozone, aerosols and ammonia). Many practices can reduce air pollution, for example proper storage and application of manure, slurry and plant protection products; the installation of effective filters in stables and factories; the installation of spray towers and scrubbers; the use of clean fuels and of catalytic converters in vehicles.
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes that produce potentially polluting gaseous emissions.
3. Unit of Measurement or Metric
This indicator captures all activities and practices that effectively reduce air pollution by the analyzed enterprise's enterprises during the analyzed time-frame.
4. How to Measure
1. First, each production site of the enterprise where pollutant emissions can potentially occur needs to be screened for the types of pollutants it can emit. 2. Then, check for all concerned sites which of the below <i>examples</i> of “best practices” that can help reduce or prevent air pollution, would be effective in the specific situation, and which of these have been implemented. The enterprise may enlist additional practices with high air pollution reduction and prevention potential. 3. Next decide which of the “unacceptable practices” - listed below under “Rating” - the enterprise has been engaged with. The score for this indicator should be “Red” if any of the enlisted “worst practices” is used, regardless of also having implemented some of the “best practices”.
5. Rating
Best practices (=Dark Green) if as many of the following has been implemented as feasible: <u>Crop production</u> • Soil fertility management with optimized fertilizer application rates and timing (both within the season and within the day); • Maintenance of permanent and dense soil coverage to prevent wind erosion (and thus dust emissions); <u>Pasture and grazing management</u> • Low emission animal housing systems (e.g. with the use of filters and scrubbers); • Low-emission manure and slurry management (e.g. by good coverage of slurry pits, the use of drip hose booms or slurry injectors resp. immediate incorporation into arable soils);

- Use of “engineered systems”, i.e., a treatment plant with solid-liquid separation that reduces ammonia from manure

Fisheries and aquaculture

Forestry

Processing and marketing

- All refrigeration equipment is properly maintained and no chlorofluorocarbon (CFC) or other ozone-depleting refrigerants are used;
- No use of methyl bromide in storage facilities or for soil fumigation;
- No open, uncontrolled incineration of wastes that can cause problematic emissions (such as certain polymers, dyes etc.).

Unacceptable (= **Red**) if any of the following is practiced in those parts of your operations where an air pollution risk exists :

- Uncontrolled or poorly managed waste incineration;
- Burning of crop residues;
- Uncovered storage of manure and slurry application without pressure control (e.g. splash plate);
- Use of substances controlled under the Montreal Protocol whose use should already have been phased out in this country;
- Complete lack of filter equipment in facilities that produce pollutant emissions.
- Use of chlorofluorocarbon (CFC) and/or other ozone-depleting refrigerants;
- Use of methyl bromide in storage facilities or for soil fumigation;
- Open, uncontrolled incineration of wastes that can cause problematic emissions (such as certain polymers, dyes etc.).

6. Limitations of the indicator

The efficacy and feasibility of air pollution abatement practices need to be determined for each specific situation. Technology provides more general options that must be assessed for potential pollutant swapping, i.e., the increased emission of one pollutant resulting from abating another. An example of pollutant swapping is increased nitrate leaching resulting from manure injection without reducing the nitrogen application rate, and thus a potential trade-off with water quality. ([Aneja V.P. et al., 2009](#))

7. Sources of information

- World Health Organization (WHO). Air quality and health. www.who.int/mediacentre/factsheets/fs313/en/ (includes a link to the 2005 WHO Air quality guidelines).
- [Aneja V.P. et al., 2009](#). Effects of Agriculture upon the Air Quality and Climate: Research, Policy, and Regulations: <http://pubs.acs.org/doi/pdf/10.1021/es8024403>
- United Nations Economic Commission for Europe (UNECE). The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone. www.unece.org/env/lrtap/multi_h1.html
- United Nations Environment Programme (UNEP). The Montreal Protocol on Substances that deplete the Ozone Layer. http://ozone.unep.org/new_site/en/Treaties/treaties_decisions-hb.php?art_id=59,60,61,62,63
- United States Environmental Protection Agency (EPA). Air Quality Index, A Guide to Air Quality and Your Health. www.epa.gov/airnow/aqi_brochure_08-09.pdf
- European Environment Agency. Air pollution. www.eea.europa.eu/themes/air

Core Indicator Name		
Ambient concentration of air pollutants (E 1.2.3)		
Dimension Environmental Integrity	Theme Atmosphere (E 1)	Sub-theme Air Quality (E 1.2)
1. Description		
This indicator uses ambient levels of air pollutants as a proxy of air quality. Air pollution is measured through the concentrations of particulate matter (PM_{2.5}), ozone (O₃), sulphur dioxide (SO₂), nitrous oxides (NO_x), volatile organic compounds (VOC), smoke and odors. Usually, national air pollution surveillance programs provide detailed information on air pollutant concentrations from monitoring stations across regions. In most developed countries, online interactive maps allow obtaining detailed information on air pollutant concentrations in specific areas (e.g. Canada monitoring fine particulate matter).		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes that produce potentially polluting gaseous emissions. Small-scale enterprises in less developed countries are probably less able to inquire about data on air pollution concentrations, thus they may omit this indicator. In such instances, it should be checked whether data from an existing air quality monitoring network can be used (and results attributed to the analyzed enterprise). Other operations, of which surrounding air quality is not monitored can opt out as well, except for large-scale and intensive operations. Note that the thematic scope of this indicator is limited to ground-level air pollution and does not include stratospheric ozone.		
3. Unit of Measurement or Metric		
This indicator measures the percentage of days of the year when ambient concentration thresholds of relevant pollutants have been exceeded in the surroundings of and due to the activities of the enterprise.		
4. How to Measure		
1. First, each production site of the enterprise where pollutant emissions can potentially occur needs to be screened for the types of pollutants it can emit. 2. Then it has to be researched for all concerned sites which air quality monitoring station is closest to the operations (unless the enterprise does its own measurements). If there is no monitoring station in sufficient proximity, the operation may chose not to apply this core indicator. This exemption, however, does not apply to large-scale and intensive operations, which are required to assess themselves (using established analytical methodologies and seeking expert opinion). In most countries, such operations will normally have to monitor and report on the pollutant load of their emissions anyway. 3. When air quality monitoring data are available, the ambient concentrations and days of threshold exceedances of the relevant pollutants (see above) should be investigated. If own measurements are used, the percentage of days that were tested, needs to be used for calculating exceedances based on national threshold values.		

The rating (except for the Dark Green and Red score) needs to be adapted, if air pollution is the result of external factors, such as meteorological inversion. In such cases, high exceedances can be justified by the location or weather conditions. This justification needs to be provided in the final SAFA Report.

5. Rating

YES (= **Dark Green**) answer is given if no exceedances of any relevant air pollutants have occurred in the surroundings of the enterprise during the analyzed time-frame.

NO (= **Red**) answer is given if applicable legal threshold values for ambient air pollutant concentrations were repeatedly exceeded in or next to the enterprise's operations, with the air pollution being attributable to the enterprise.

6. Limitations of the indicator

Ambient concentrations of air pollutants are influenced by many factors, such as local emission sources and weather conditions, in particular the direction and speed of wind. Thus an operation may not emit any air pollutants and yet find itself in an area with high pollution due to wind conditions and location (e.g. next to highways). Hence, the attribution of air pollution to an enterprise can be challenging.

7. Sources of information

- World Health Organization (WHO). Air quality and health. www.who.int/mediacentre/factsheets/fs313/en/ (includes a link to the 2005 WHO Air quality guidelines).
- United Nations Economic Commission for Europe (UNECE). The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone. www.unece.org/env/lrtap/multi_h1.html
- United States Environmental Protection Agency (EPA). Air Quality Index, A Guide to Air Quality and Your Health. www.epa.gov/airnow/aqi_brochure_08-09.pdf
- European Environment Agency. Air pollution. www.eea.europa.eu/themes/air
- Interactive map of ambient levels of fine particulate matter in Canada: <http://maps-cartes.ec.gc.ca/indicators-indicateurs/default.aspx?mapId=17&xMin=-17200268.28492363&yMin=4842529.641591634&xMax=-5498653.153107968&yMax=12669696.953842915&lang=en>

Core Indicator Name		
Water conservation target (E 2.1.1)		
Dimension Environmental Integrity	Theme Water (E 2)	Sub-theme Water Withdrawal (E 2.1)
1. Description		
This indicator serves to check the presence of a written plan that sets a measurable and binding target for achieving a decrease in water consumption and thus prevents that the enterprise contributes to problematic levels of water scarcity. Water reduction targets can be phrased as percentage, total absolute amounts, or per unit of production. Water conservation refers to any beneficial reduction in water loss, use or waste.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes. The following enterprises may opt out from this indicator: • Primary producers that do not irrigate or withdraw water for their production (e.g. marine fisheries); • Small-scale producers that irrigate but do not have a written water conservation target.		
3. Unit of Measurement or Metric		
This indicator serves to check whether the enterprise has set a concrete and binding target for reducing water consumption or water withdrawals by its operations during the analyzed time-frame.		
4. How to Measure		
Determine if the operation has a written and binding plan – available to all stakeholders - that includes a target for the reduction of water consumption with exact steps that outline how that target will be achieved within the expected time-frame.		
5. Rating		
YES (= Dark Green) answer is given if: the enterprise has a written plan, available to all stakeholders, with water conservation targets; AND steps have been implemented towards achieving these targets. PARTIAL (= Yellow) answer is given either if: • the enterprise has a plan with set targets for the reduction of water consumption, but no steps have been made towards achieving the targets OR • the enterprise has targets and has implemented steps towards water conservation, however this has not been put into writing OR • the enterprise has a plan with set targets for the reduction of water consumption, and steps have been made towards achieving the targets, however the plan is not available for all of the stakeholders. NO (= Red) answer is given if none of the above requirements have been met as yet.		
6. Limitations of the indicator		
One of the key element of this (and other target-based) indicator is whether steps have been already		

made towards meeting the target. If a SAFA has been already carried out previous year(s), consequent steps have to be evaluated with this indicator since the last assessment, in order to receive a “Best” score. Thus an enterprise should not be rewarded even if a written plan with targets exists, yet steps are not being made (between two SAFA assessments) towards meeting those targets.

7. Sources of information

- FAO. Natural Resources Management and Development Department. Water. www.fao.org/nr/water/
- World Overview of Conservation Approaches and Technologies (WOCAT, hosted by the Bern University): www.wocat.net
- United States Environmental Protection Agency (EPA). How to conserve water and use it effectively. <http://water.epa.gov/polwaste/nps/chap3.cfm>
- Vickers (2001). Handbook of water use and conservation.

Core Indicator Name		
Water conservation practices (E 2.1.2)		
Dimension Environmental Integrity	Theme Water (E 2)	Sub-theme Water Withdrawal (E 2.1)
1. Description		
This indicator refers to all practices that aim at saving water in agriculture-based food chains. Water conservation refers to any beneficial reduction of water loss, use or waste. Many practices can potentially conserve water, examples are maximizing the efficiency of irrigation systems, rainwater harvesting; cultivation of water-efficient crops, use of less water-demanding processing technologies, etc..		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes that use freshwater in their operations.		
3. Unit of Measurement or Metric		
This indicator intends to capture the activities and practices implemented by the enterprise that have effectively helped conserve water during the analyzed time-frame.		
4. How to Measure		
1. Determine which of the below <i>examples</i> of “best practices” whose implementation has been shown to support water conservation, are implemented in your enterprise (if applicable and feasible). You may enlist additional practices with high water conservation potential. 2. Next decide in which of the “unacceptable practices” - listed below under “Rating” - the operation has been engaged. The score for this indicator should be “Red” if any of the enlisted “worst practices” is used, regardless of also having implemented some of the “best practices”.		
5. Rating		
Best practices (=Dark Green) if as many of the following has been implemented as feasible:		
<u>Crop and livestock production</u>		
• Mulching and tillage to break pore continuity and reduce water evaporation from soils; • Water harvesting; • Minimization of irrigation water, e.g. by use of efficient irrigation technologies; • Use of soil moisture and rainfall sensors to optimize irrigation schedules; • Breeding and selection of crop species and varieties and of animal species and breeds that are adapted to local climate and make efficient use of water; • Enhancement of water use efficiency by preventing losses of produce due to pests, diseases or lack of nutrients; • Wastewater recycling in stables; • Reducing water use for the cleaning of stables and milk parlors by optimizing water pressure and hose diameter		
<u>Fisheries and aquaculture</u>		
• Maintaining/installing/upgrading accurate mechanisms to control flows throughout the		

aquaculture system;

- Minimizing water use for washing aquaculture facilities;

Forestry

- Breeding and selection of water-efficient tree species and varieties;
- Water-saving measures in tree nurseries;

Processing and marketing

- Rainwater harvesting;
- Wastewater recycling;

Unacceptable (=Red) if ANY of the following is practised:

- Inefficient or not regularly maintained irrigation systems;
- Monoculture cultivation of water-demanding crops/trees in water-scarce areas;

6. Limitations of the indicator

The efficacy and appropriateness of water-saving practices depends on local climate and water availability. In certain situations, saving water may even prove counter-productive, as sewage systems are not properly flushed anymore, one consequence being noxious odors. Hence, it has to be determined locally what practices are indeed beneficial.

7. Sources of information

- FAO. Natural Resources Management and Development Department. Water. www.fao.org/nr/water/
- World Overview of Conservation Approaches and Technologies: www.wocat.net
- United States Environmental Protection Agency (EPA). How to conserve water and use it effectively. <http://water.epa.gov/polwaste/nps/chap3.cfm>

Core Indicator Name		
Ground and surface water withdrawals (E 2.1.3)		
Dimension Environmental Integrity	Theme Water (E 2)	Sub-theme Water Withdrawal (E 2.1)
1. Description		
Ground and surface water withdrawals aim to put the freshwater withdrawals by resp. for the company in relation with the regionally available freshwater resources (annual rainfall, annual groundwater recharge, water carried into the region by allochthonous rivers).		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes that directly use groundwater or surface water.		
3. Unit of Measurement or Metric		
This indicator measures the share of the annual withdrawals of ground and surface water as a percentage of total renewable water resources available over the same period of time.		
4. How to Measure		
1. Determine water availability or the level of water stress / water scarcity for all regional watersheds from which the enterprise withdraws freshwater. Ideally, the amount of water that can be withdrawn from the area of the watershed without damage to ecosystems and to other water users should be quantified. 2. Quantify the annual water withdrawals for all operations in each concerned regional watershed. 3. Quantify (by dividing by annual water availability) and rate the contribution of operations to increasing water stress in the respective regional watershed. This will require an assessment of how much of the totally available water can be withdrawn for the operation. For this assessment, ancillary information, e.g. on levels of water scarcity experienced by ecosystems and water users, should be used.		
5. Rating		
“Dark Green” SAFA score is reached if : The enterprise does not contribute to water supply problems of ecosystems or human water users at any of the sites where it operates. Unacceptable practices (automatically lead to a “Red” SAFA score): The enterprise overuses water resources, thus putting the existence of human water users and of ecosystems at risk.		
6. Limitations of the indicator		
The reliable quantification of water availability in a certain region can be challenging and almost impossible where no reliable public sources exist. Weighting water withdrawals (e.g. according to opportunity cost) and putting them in relation with water availability is particularly difficult and should be done with the support of experts. The biggest difficulty will arguably be the assigning of water quantities to users in the watershed, as this can be based on different criteria, e.g. area owned, monetary value of production, importance of products for human subsistence etc..		

7. Sources of information

- FAO. AQUASTAT – information system on water and agriculture.
www.fao.org/nr/water/aquastat/main/index.stm
- International Standards Organization (ISO). ISO 14046: Environmental management – Water footprint – Principles, requirements and guidelines.
www.iso.org/iso/catalogue_detail?csnumber=43263
- World Business Council for Sustainable Development (WBCSD). Global Water Tool.
www.wbcsd.org/work-program/sector-projects/water/global-water-tool.aspx
- Google Earth layer showing water stress levels, prepared by Pfister et al. (2009):
www.ifu.ethz.ch/staff/stpfiste/Impact_factors_LCA_pfister_et_al.kmz
- The Sustainability Council (TSC). Review of methodologies to assess water availability.
www.sustainabilityconsortium.org/wp-content/themes/sustainability/assets/pdf/whitepapers/2011_Brown_Matlock_Water-Availability-Assessment-Indices-and-Methodologies-Lit-Review.pdf

Core Indicator Name		
Clean water target (E 2.2.1)		
Dimension Environmental Integrity	Theme Water (E 2)	Sub-theme Water Quality (E 2.2)
1. Description		
The indicator Clean water target refers to the existence of a written plan that i.e. sets a measurable and binding goal in achieving the highest quality of water released by the operation compared with baseline levels (as identified by the operation). The target could be phrased in percentage, total absolute amounts, or per unit of produce. Clean water in agriculture-based food chains essentially refers to preventing the discharge of pollutants and sediments to surface and/or groundwater, losing soil by poor agricultural practices.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes.		
3. Unit of Measurement or Metric		
This indicator asks whether the enterprise has set a clean water target in the analyzed enterprise's operations during the analyzed time-frame.		
4. How to Measure		
Determine whether the enterprise has a written and binding plan – available to all stakeholders - that includes concrete targets for the reduction of the discharge of water pollutants, with exact steps that outline how these targets can be achieved within the expected time-frame.		
5. Rating		
YES (= Dark Green) answer is given if: the enterprise has a written plan, available to all stakeholders, with clean water targets; AND steps have been implemented towards achieving those targets. PARTIAL (= Yellow) answer is given either if: - the enterprise has a plan with set targets for the reduction of water pollution, but no steps have been yet made towards achieving that these targets OR - the enterprise has target and has implemented steps towards preventing water pollution, however this has not been put into writing OR - the enterprise has a plan with set targets for the reduction of water pollution, and steps have been taken towards achieving these targets, however the plan is not publicly available. NO (= Red) answer is given if none of the above requirements have been met as yet.		
6. Limitations of the indicator		
Water quality is determined by numerous chemical and biological parameters. For technical and financial reasons, only a selection of these can usually be analyzed. Therefore, monitoring the efficacy of the implemented measures can be challenging.		
7. Sources of information		
FAO. Water quality. www.fao.org/nr/water/topics_quality.html		

- United Nations Childrens' Fund (UNICEF). UNICEF Handbook on Water Quality.
www.unicef.org/wash/files/WQ_Handbook_final_signed_16_April_2008.pdf
- United Nations Environment Programme.
http://esa.un.org/iys/docs/san_lib_docs/water_quality_outlook.pdf
- United States Environmental Protection Agency (EPA). Monitoring and Assessing Water Quality.
<http://water.epa.gov/type/rsl/monitoring/>
- World Health Organization (WHO). Guidelines for drinking-water quality.
www.who.int/water_sanitation_health/dwq/guidelines/en/
- World Health Organization (WHO). Animal waste, water quality and human health.
www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer_Onu?id=487

Core Indicator Name		
Water pollution prevention practices (E 2.2.2)		
Dimension Environmental Integrity	Theme Water (E 2)	Sub-theme Water Quality (E 2.2)
1. Description		
This indicator refers to all practices that aim at preventing and reducing water pollution from agriculture-based food chains. Activities that can cause water pollution include poorly located or managed animal feeding operations; overgrazing; practices that cause soil erosion by water and improper, excessive or poorly timed application of pesticides, irrigation water and fertilizer. Many practices can prevent and/or reduce water pollution, for example management practices that control the volume and flow rate of runoff water, soil conservation practices, the proper storage and application of manure, slurry and silage, and appropriate facility wastewater and runoff management.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes that produce wastewater or otherwise impact on water quality (e.g. through soil erosion, or animals entering open water).		
3. Unit of Measurement or Metric		
This indicator intends to capture the type of activities and practices implemented by the enterprise that effectively prevented or reduced water pollution during the analyzed time-frame.		
4. How to Measure		
1. Delineate those sites and areas where a risk of water pollution by your operations exists. 2. For these areas, determine which of the below <i>examples</i> of “best practices” whose implementation has been shown to prevent or reduce water pollution, have been implemented in your enterprise (if applicable and feasible). The enterprise may enlist additional practices with high pollution prevention potential. 3. Next check whether any of the “unacceptable practices” listed below under “Rating” are in place in the enterprise. The score for this indicator should be “Red” if any of the enlisted “worst practices” is used, regardless of also having implemented some of the “best practices”.		
5. Rating		
Best practices (=Dark Green) if as many of following has been implemented as feasible:		
<u>Cropland management</u> • Use of cover crops, and avoidance of bare fallows; • Land use and land cover change to more complex and diverse systems with better soil coverage, e.g. agroforestry, mixed crop-livestock systems, mixed rice-fish systems, intercropping, perennials, polycultures, forest gardens, etc. • Soil and water conservation measures, e.g. soil or stone bunds, drainage measures, furrow dikes, swales, raised beds; • Adoption of no-spray buffer zones; • Conservation tillage practices; • Non-use of highly hazardous chemicals, POPs and those having potential adverse effects on		

aquatic life, including copper sulfite, glyphosate, atrazine, 2,4-D, carbaryl, malathion, etc;

- Protecting hedgerows, water courses, wells, boreholes and springs by not cultivating adjacent to them or leaving at least 3 meters of distance with buffer strips;

Grazing and pasture management

- Keeping livestock out of sensitive/degraded areas, providing alternative sources of water and shade, and promoting re-vegetation of ranges, pastures, and riparian zones;
- Use of mobile livestock dipping facilities with a sealed drainage and collection system;

Fisheries and aquaculture

- Use of non-chemical methods of managing aquatic weeds;
- Recirculation closed systems are in place in aquaculture systems;

Forestry

Processing and marketing

- Separated or recovered wastewater;
- Wastewater treatment e.g. centrifugation; evaporation, filtration; flotation, gravity separation; membrane systems, conversion of constituents; biological treatment, etc.

Unacceptable (=Red) if ANY of the following is practised:

1. Application of pesticides that are not allowed by law;
2. Absence of any buffer zones to protect surface water, violation of water protection areas.

6. Limitations of the indicator

The efficacy and appropriateness of practices to prevent water pollution may be difficult to rate.

7. Sources of information

- FAO. Wastewater quality guidelines for agricultural use. www.fao.org/docrep/T0551E/t0551e04.htm
- FAO. Wastewater treatment and use in agriculture. www.fao.org/docrep/t0551e/t0551e00.htm#Contents
- FAO. Highly hazardous pesticides. www.fao.org/agriculture/crops/core-themes/theme/pests/code/hhp/en/
- Stockholm Convention on Persistent Organic Pollutants. <http://chm.pops.int/default.aspx>
- World Health Organization (WHO). Animal waste, water quality and human health. www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer_Onu?id=487
- FAO: Water Quality for Irrigation. <ftp://ftp.fao.org/docrep/fao/010/a1336e/a1336e07.pdf>
- FAO. Water quality. www.fao.org/nr/water/topics_quality.html

Core Indicator Name		
Concentration of water pollutants (E 2.2.3)		
Dimension Environmental Integrity	Theme Water (E 2)	Sub-theme Water Quality (E 2.2)
1. Description		
Water pollutants are substances discharged into water bodies without adequate treatment that compromise the health of humans, animals and ecosystems. Most water pollution comes from non-point sources, e.g. through sedimentation, whereas point source water pollution occurs where wastewater is discharged. Government agencies and research organizations have published standardized analytical test methods to test concentrations of such pollutants.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes whose operations impact on water quality. Small-scale enterprises are probably less able to test for the concentrations of water pollutants and may omit this indicator. In such cases, the availability of information from water quality monitoring conducted by public agencies should be checked.		
3. Unit of Measurement or Metric		
This indicator measures the percentage of days of the year when relevant water quality thresholds have been exceeded in water bodies (including ground and, surface water, coastal and marine water) due to effluents from the operations.		
4. How to Measure		
While the details of sampling, testing and analysis are beyond the scope of these Guidelines, the following is a general description of the significance of water quality tests usually made. Testing procedures and parameters may be grouped into physical, chemical, bacteriological and microscopic categories. - Physical tests indicate properties such as water conductivity, density and odour. - Chemical tests determine the amounts of mineral and organic substances that affect water quality. Examples of relevant parameters: Biochemical oxygen demand (BOD), chemical oxygen demand (COD), dissolved oxygen, pH, nitrate, orthophosphate, pesticide residues and metabolites, polycyclic aromatic hydrocarbons (PAHs), - Bacteriological tests show the presence of bacteria, characteristic of e.g. fecal pollution. - Bioassays are a means to determine the quality of water as a habitat for organisms such as Daphnia and caddis-fly larvae. The testing should be carried out at least twice a year, and after any event that could have affected the safety of the water (flood, sewage backup).		
5. Rating		
YES (= Dark Green) answer is given if no exceedances of critical thresholds have occurred in water bodies affected by the operation. NO (= Red) answer is given if repeated exceedances of at least one critical threshold were caused by the enterprise. The rating (except for the Dark Green and Red score) could be somewhat altered if water pollution is the result of external factors. In such cases, high exceedances can be justified by the location (e.g.		

downstream) of the operations and this justification needs to be provided in the final SAFA Report.

6. Limitations of the indicator

The levels of water pollutants are influenced by many factors such as local emissions sources, weather conditions, etc. Thus an operation may not even emit any water pollutants, yet finds itself in an area with high pollution because of its location (e.g. next to an intensive livestock farm).

7. Sources of information

- FAO: WATER QUALITY MONITORING, STANDARDS AND TREATMENT.
www.fao.org/docrep/X5624E/x5624e05.htm
- FAO: Water Quality for Irrigation. <ftp://ftp.fao.org/docrep/fao/010/a1336e/a1336e07.pdf>
- FAO. Water quality. www.fao.org/nr/water/topics_quality.html
- United Nations Children's Fund (UNICEF). UNICEF Handbook on Water Quality.
www.unicef.org/wash/files/WQ_Handbook_final_signed_16_April_2008.pdf
- United Nations Environment Programme.
http://esa.un.org/iys/docs/san_lib_docs/water_quality_outlook.pdf
- United States Environmental Protection Agency (EPA). Monitoring and Assessing Water Quality.
<http://water.epa.gov/type/rsi/monitoring/>
- World Health Organization (WHO). Guidelines for drinking-water quality.
www.who.int/water_sanitation_health/dwg/guidelines/en/
- World Health Organization (WHO). Animal waste, water quality and human health.
www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer_Onu?id=487

Core Indicator Name		
Wastewater quality (E 2.2.4)		
Dimension Environmental Integrity	Theme Water (E 2)	Sub-theme Water Quality (E 2.2)
1. Description		
This indicator assesses the suitability of wastewater for disposal or re-use. Recommended water testing methodologies, parameters and legal thresholds vary among countries, as well as with the intended use or discharge location. For instance, the characteristics of wastewater from food processing factories can be characterized by high biochemical oxygen demand (BOD), suspended solids (SS) and high oil concentrations as well as smells from acidification.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for all enterprises that discharge wastewater during the analyzed time-frame. Small-scale enterprises may opt to omit this indicator because of lack of reliable data.		
3. Unit of Measurement or Metric		
This indicator measures the share of wastewater with a good water quality (e.g. concentrations of faecal coliforms, heavy metals, BOD and COD) as a percentage of the total wastewater of operations . A good water quality is given if the quantity and quality of discharged wastewater cause no harm to human, plant, animal and ecosystem health. This means that wastewater treatment methods have to be adapted to the quantities and pollutant charge as well as the intended method of discharge of the treated water.		
4. How to Measure		
While the details of sampling, testing and analysis are beyond the scope of these Guidelines, the following is a general description of the significance of wastewater quality tests usually made. Testing procedures and parameters may be grouped into physical, chemical, bacteriological and microscopic categories. - Physical tests indicate properties such as water conductivity, density and odour. - Chemical tests determine the amounts of mineral and organic substances that affect water quality. Examples of relevant parameters: Biochemical oxygen demand (BOD), chemical oxygen demand (COD), dissolved oxygen, pH, nitrate, orthophosphate, pesticide residues and metabolites, polycyclic aromatic hydrocarbons (PAHs), - Bacteriological tests show the presence of bacteria, characteristic of e.g. fecal pollution. - Bioassays are a means to determine the quality of water as a habitat for organisms such as Daphnia and caddis-fly larvae. The testing should be carried out at least twice a year, and after any event that could have affected the safety of the water (flood, sewage backup).		
5. Rating		
YES (= Dark Green) answer is given if: all wastewater discharged and reused by the enterprise is of a quality that will not cause harm to the health of humans, plants, animals and ecosystems.		

NO (= **Red**) answer is given if:

wastewater with pollutant concentrations that are dangerous to the health of humans, plants, animals and ecosystems, and/or that exceed applicable legal thresholds (or, in the absence of such thresholds, WHO recommendations) is discharged repeatedly and in quantities that exceed the diluting capacity of the concerned surface waters.

6. Limitations of the indicator

For financial and technical reasons, it may not be possible to comprehensively analyze wastewater quality. In such cases, a prior risk analysis should be done to identify potential problem substances. The chemical analysis would then focus on these substances.

Where non-point sources of water pollution exist, analyzing the quality of this water may not be possible. In such cases, the quality of the receiving water bodies should be monitored. The challenge in those instances is to attribute pollutions to the right sources.

7. Sources of information

- FAO: Wastewater quality guidelines for agricultural use.
www.fao.org/docrep/T0551E/t0551e04.htm
- FAO: WATER QUALITY MONITORING, STANDARDS AND TREATMENT.
www.fao.org/docrep/X5624E/x5624e05.htm
- FAO: Water Quality for Irrigation. <ftp://ftp.fao.org/docrep/fao/010/a1336e/a1336e07.pdf>
- FAO. Water quality. www.fao.org/nr/water/topics_quality.html
- United Nations Children's Fund (UNICEF). UNICEF Handbook on Water Quality.
www.unicef.org/wash/files/WQ_Handbook_final_signed_16_April_2008.pdf
- United Nations Environment Programme.
http://esa.un.org/iys/docs/san_lib_docs/water_quality_outlook.pdf
- United States Environmental Protection Agency (EPA). Monitoring and Assessing Water Quality.
<http://water.epa.gov/type/rsll/monitoring/>
- World Health Organization (WHO). Guidelines for drinking-water quality.
www.who.int/water_sanitation_health/dwq/guidelines/en/
- World Health Organization (WHO). Animal waste, water quality and human health.
www.zaragoza.es/ciudad/medioambiente/onu/en/detallePer_Onu?id=487

Core Indicator Name		
Soil improvement practices (E 3.1.1)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Soil Quality (E 3.1)
1. Description		
This indicator refers to all practices that aim at improving the physical, chemical and biological properties of the soils used by an enterprise. Depending on the conditions of soils and on the local climatic, terrain and geological characteristics, numerous measures can be taken to improve soil quality: controlled application of organic and mineral fertilizers to improve nutrient deficiencies (e.g. with compost, animal manure, NPK, DAP fertilizers), liming to increase soil pH, phyto- or chemical remediation to reduce salinity, compost application to enhance soil organic matter content and stimulate biological activity, or sub soiling to remove soil compaction, to cite some examples.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that directly involve the use of soils.		
3. Unit of Measurement or Metric		
The indicator focuses on the activities and practices implemented by the enterprise to effectively increase the quality and fertility of the soils it uses.		
4. How to Measure		
- Determine the total area on which soils are used by your operation. - List all activities and practices that the operation has implemented and that have a recognized potential to contribute to enhancing soil quality under the given climatic and pedological conditions, or to preserve already productive and healthy soils. Examples of best practices include: - Application of organic fertilizers (manure, slurry, compost) to enhance soil organic matter content, improve crop nutrient supply and stimulate soil life; - Wise application of mineral fertilizers to improve soil fertility; - Liming to increase soil pH if acidity is present; - Improving soil drainage, phyto-remediation and/or chemical remediation (e.g. using gypsum) to reduce soil salinity and decrease soil pH; - Better drainage and/or subsoiling to increase nutrient availability and water retention; - Implementation of a diverse crop rotation including the introduction of fodder and cover crops, improved fallow techniques, integration of agroforestry, intercropping, etc. to enhance soil structure, soil organic matter content and soil biological activity and soil health in general; - Determine the share of the total area used where at least one effective measure is practiced.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): All problematic aspects for soil quality are tackled by effective measures on all areas concerned.		

Unacceptable practices (automatically lead to a “Red” SAFA score): Measures for enhancing or conserving soil quality (where it is already very high) have been implemented on less than 20% of the used area.
6. Limitations of the indicator
Consensus on the efficacy and trade-offs of soil-enhancing practices does not yet exist for all practices. In some instances, measures that remove one problem can aggravate another problem.
7. Sources of information
• FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm • FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML • FAO Land Resources. Soils and maps. http://www.fao.org/nr/land/soils/en/ • International Union of Soil Sciences (IUSS). www.iuss.org • UNESCO and IUSS. ISRIC World Soil Information. www.isric.org • Soil Science Society of America. www.soils.org

Core Indicator Name		
Soil physical structure (E 3.1.2)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Soil Quality (E 3.1)
1. Description		
The physical soil properties, such as the soil texture, porosity and structure, reveal the grade of nutrient- and water holding capacity of the soils which are important aspects for its health and productivity. It strongly influences volatilization from gaseous soil compounds (including GHG emissions as nitrous oxide and carbon dioxide), water balance (also at the regional level), soil packing and root penetration, and uptake of soil nutrients by plants, and good soil aeration that are preconditions for a thriving soil biota, the storage of organic matter and soil carbon.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that use soils in ways that can modify soil physical structure, through processes of compaction, aggregate stabilization or destabilization. This definition will normally include crop and livestock production and forestry. However, where soils are used to store heavy items or park heavy vehicles, the indicator is relevant as well.		
3. Unit of Measurement or Metric		
The calculation focuses on the share of the utilized land where the conditions of soil physical structure are good with respect to the local climate and bedrock.		
4. How to Measure		
1. Determine the total area on which soils are used by your operation. 2. Through visual inspection of soil surface and/or crop (root) growth using the spade method, in combination with quantitative measurements (e.g. with a penetrometer), delineate those areas where soil compaction or an instable soil structure limits plant growth and/or causes water-logging. If possible, ask experienced local land users for signs of bad soil structure observed in the past. Check the FAO Visual Soil Assessment Field Guides for a detailed methodology (see below). 3. Calculate the percentage of areas with good physical structure in the total area used by your operation.		
5. Rating		
“Dark Green” SAFA score is reached if : 1. Soil physical structure is in excellent condition on all land used by your enterprise, with no signs of soil compaction or structural degradation. Unacceptable practices (automatically lead to a “Red” SAFA score): • On a substantial (e.g. 10% of the total area) share of land, soil physical structure has been damaged to an extent that allows no more growth of productive vegetation (specialist plant species with low biomass not included).		
6. Limitations of the indicator		
It can be difficult to determine the share by which the enterprise's activities have contributed to the current state of soil physical structure. Bedrock, climate and the history of land use all can strongly affect this indicator's outcome. Furthermore, capturing the full range of conditions of soil physical structure in a heterogeneous landscape can be challenging. For sampling instructions, see e.g. the FAO Field Guides for Visual Soil Assessment (see below).		
7. Sources of information		

- FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm
- FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML
- FAO Land Resources. Soils and maps. <http://www.fao.org/nr/land/soils/en/>
- International Union of Soil Sciences (IUSS). www.iuss.org
- UNESCO and IUSS. ISRIC World Soil Information. www.isric.org
- Soil Science Society of America. www.soils.org
- Soil Quality Pty Ltd (Australian Government et al.). <http://soilquality.org.au/factsheets>
- Joint Research Centre of the European Union, Soil Portal. <http://eusoils.jrc.ec.europa.eu/>
- Agroscope (Switzerland). Tyres / Tracks and Soil Compaction (TASC). www.agroscope.admin.ch/shop/00008/00049/index.html?lang=en
- Aarhus University, Agroscope, Bern University of Applied Sciences. Terranimo, Terramechanical model for the simulation of stress under agricultural machinery. www.soilcompaction.dk/Menu/01_Home/Home.aspx (test version)

Core Indicator Name		
Soil chemical quality (E 3.1.3)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Soil Quality (E 3.1)
1. Description		
The chemical quality of soils determines their capacity to deliver various functions that are essential for vegetation growth, nutrient cycling and other ecosystem functions. It is a complex phenomenon that can be approached through a multitude of parameters, including pH value, electrical conductivity, cation exchange capacity, base saturation and the contents (total, dissolved, plant-available etc.) of various chemical elements and molecules. The latter are often segregated into macronutrients, such as nitrogen, phosphorus and potassium, micronutrients and noxious substances.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that use soils in ways that can modify soil chemical health, through processes of fertilization, irrigation, liming, crop rotation, mono-cropping, and the application of chemical substances in general. This definition will normally include crop and livestock production and forestry. However, where any chemicals are applied to soils, e.g. for disposal, the indicator will be relevant as well.		
3. Unit of Measurement or Metric		
The indicator quantifies and rates the share of the utilized land where the chemical quality of soils is high with respect to the parent material and local climate.		
4. How to Measure		
1. Determine the total area on which soils are used by your operation. 2. Through visual inspection of plant growth in combination with soil sampling and analysis, delineate those areas where soil pH is too high (pH >8.5) or too low (pH <4.5), salinity is too high, chemical pollution (with heavy metals, e.g., Cd, Cu, Ni, or organic compounds, e.g., PCBs) or imbalances of nutrient supply (excess or deficiency) limit plant growth. If possible, ask experienced local land users for signs of e.g. imbalances of plant nutrient supply. Check the FAO Visual Soil Assessment Field Guides for a detailed methodology (see below). Note that very useful colour guides to crop nutrient deficiencies exist for many regions in the world. Soil sampling for laboratorial test should take into consideration soil pH, available P, Na, Mg, exchangeable Ca, Mg and Al to estimate Total Acidity, Cation Exchange Capacity (CEC) and Base Saturation. 3. Calculate the percentage of areas with high chemical quality in the total area used by your operation.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): Soil chemical quality is in excellent condition on all land used by your enterprise, with no signs of chemical soil degradation. Unacceptable practices (automatically lead to a “Red” SAFA score): On a substantial (e.g. 10% of the total area) share of land, soil chemical quality has been damaged to an extent that allows no more growth of productive vegetation (specialist plant species with low biomass not included).		
6. Limitations of the indicator		

Soil chemical quality is the product of numerous interacting parameters – macro- and micronutrient contents, soil pH, exchangeable cations and anions, heavy metals, organic compounds etc. It can therefore not be captured completely. It may also be difficult to distinguish between inherent (reflects the influence of parent material, climate and the history of land use) and dynamic (reflects management decisions of current or past land uses) soil chemical quality. Furthermore, capturing the full range of conditions of soil chemical quality in a heterogeneous landscape and over time can be challenging.

7. Sources of information

- FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm
- FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML
- FAO Land Resources. Soils and maps. <http://www.fao.org/nr/land/soils/en/>
- International Union of Soil Sciences (IUSS). www.iuss.org
- Cornell Soil Health. <http://soilhealth.cals.cornell.edu/extension/manual.htm>
- UNESCO and IUSS. ISRIC World Soil Information. www.isric.org
- Soil Science Society of America. www.soils.org

Core Indicator Name		
Soil biological quality (E 3.1.4)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Soil Quality (E 3.1)
1. Description		
This indicator refers to the macro-, and microorganisms present in soils. The soil organisms provide a multitude of benefits for the soils and ecosystem including breakdown of organic matter leading to nutrient and carbon release, improving soil structure and water holding capacity, providing a sink for GHG emissions and fighting pests among others. Soil biota activity strongly depends on soil organic matter content, soil physical structure and soil chemical quality. The interactions of all these factors determine soil fertility and ecosystem functioning.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that use soils in ways that can modify soil biological health. This definition will normally include crop and livestock production and forestry. However, the indicator should be applied to any area where the living conditions of soil biota are affected by your operation.		
3. Unit of Measurement or Metric		
The indicator quantifies and rates the share of the utilized land where the biological quality of soils is high with respect to the local climate and conditions of parent material.		
4. How to Measure		
1. Determine the total area on which soils are used by your operation. 2. Through soil sampling and analysis, determine the values of feasible soil biological quality parameters on the land used by your operation. Established metrics include the abundances of certain taxa (e.g. earthworms, ants, termites), the activity of microorganisms or soil biota as a whole (e.g. soil respiration), and the presence of metabolic substances (e.g. ergosterol, enzymes such as phosphatases, urease and dehydrogenase). Thresholds for good soil biological quality partly need to be established considering local chemical and climatic conditions. 3. Calculate the percentage of areas with high biological quality in the total area used by your enterprise.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): Soil biological quality is in excellent condition on all land used by your enterprise, with no signs of biological soil degradation, i.e. a reduction of soil life. Unacceptable practices (automatically lead to a “Red” SAFA score): On a substantial (e.g. 10% of the total area) share of land, soil biological quality has been damaged such that soil functioning is not guaranteed anymore.		
6. Limitations of the indicator		
Soil biological quality is the product of numerous interacting parameters and can therefore not be completely captured. Also, capturing the full range of conditions of soil biological quality in a heterogeneous landscape and, in particular, over time can be challenging. For sampling instructions, see e.g. the FAO Field Guides for Visual Soil Assessment (see below).		

7. Sources of information

- FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm
- FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML
- FAO Land Resources. Soils and maps. <http://www.fao.org/nr/land/soils/en/>
- International Union of Soil Sciences (IUSS). www.iuss.org
- UNESCO and IUSS. ISRIC World Soil Information. www.isric.org
- Soil Science Society of America. www.soils.org
- Soil Quality Pty Ltd (Australian Government et al.). <http://soilquality.org.au/factsheets>
- Mäder et al. (2002). Soil fertility and biodiversity in organic farming. <http://www.sciencemag.org/content/296/5573/1694.abstract>
- Martinez-Salgado et al. Biological soil quality indicators: a review. <http://www.formatex.info/microbiology2/319-328.pdf>
- Joint Research Centre of the European Union, Soil Portal. <http://eusoils.jrc.ec.europa.eu/>

Core Indicator Name		
Soil organic matter content (E 3.1.5)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Soil Quality (E 3.1)
1. Description		
Soil Organic Matter (SOM) is considered to be an indicator for soil quality and productivity influencing physical, chemical and biological properties of the soils. In particular it contributes to soil aggregate stability, improving soil structure and hence soil aeration and infiltration leading to a higher water holding capacity in the soil. Content and quality of soil organic matter also affect the nutrient cycling and gas (including carbon dioxide) exchange in soils, and are thus related with soil life, soil fertility and the functioning of ecosystems.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that use soils in ways that can modify soil organic matter content. This definition will normally include arable crop production, livestock production and forestry.		
3. Unit of Measurement or Metric		
This indicator measures the share of the utilized land where content and qualities of soil organic matter are high in consideration of the local climate and bedrock . As a minimum, soil organic matter content (quantity) should be measured.		
4. How to Measure		
1. Determine the total area on which soils are used by your operation. 2. Through soil sampling and analysis, determine the values of feasible soil biological quality parameters on the land used by your operation. Established metrics include the abundances of certain taxa (e.g. earthworms, ants, termites), the activity of microorganisms or soil biota as a whole (e.g. soil respiration), and the presence of metabolic substances (e.g. ergosterol, enzymes such as phosphatases, urease and dehydrogenase). Thresholds for good soil biological quality partly need to be established considering local chemical and climatic conditions. 3. Calculate the percentage of areas with high biological quality in the total area used by your enterprise.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): Soil organic matter content and quality are in excellent condition on all land used by your enterprise, with no signs of quantitative or qualitative losses. Unacceptable practices (automatically lead to a “Red” SAFA score): On a substantial (e.g. 10% of the total area) share of land, soil organic matter content is massively and rapidly reduced, e.g. by draining peat land or plowing up of grassland.		
6. Limitations of the indicator		
Rating soil organic matter (SOM) content remains a challenge, since the optimum content will depend on how different soil functions are valued. For crop production, soils with very high SOM content may not be ideal because their structure can be instable. For carbon sequestration, a maximization of SOM content will be desirable. Similarly, the quality of SOM is not only difficult to determine for methodological and financial reasons, but it is also hard to rate, as there is a trade-off between the function of SOM as a carbon reservoir and its function as a stock of plant nutrients.		

7. Sources of information

- FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm
- FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML
- FAO Land Resources. Soils and maps. <http://www.fao.org/nr/land/soils/en/>
- International Union of Soil Sciences (IUSS). www.iuss.org
- UNESCO and IUSS. ISRIC World Soil Information. www.isric.org
- Soil Science Society of America. www.soils.org
- Soil Quality Pty Ltd (Australian Government et al.). <http://soilquality.org.au/factsheets>
- FAO (2005). The importance of soil organic matter.
<http://www.fao.org/docrep/009/a0100e/a0100e00.htm#Contents>

Core Indicator Name		
Land conservation and rehabilitation plan (E 3.2.1)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Land Degradation (E 3.2)
1. Description		
This indicator is for checking the presence of a written plan that sets concrete, measurable and binding targets in preventing land degradation and, where necessary, rehabilitating degraded land. The target can for example be phrased as (total) acreage or (relative) share of used land where a certain level of soil quality and integrity is conserved or restored.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that directly involve the use of soils.		
3. Unit of Measurement or Metric		
The indicator asks whether the enterprise has a written plan that describes the targets of conserving soil integrity and rehabilitating degraded soils, as well as the steps necessary to reach the targets.		
4. How to Measure		
1. Determine the total area of land where a substantial or total loss of productive biological capacity has been caused by your operation. The loss of productive capacity can be approximated by assessing the degree of soil degradation – by water erosion, wind erosion, compaction, salinization, nutrient mining or chemical pollution – on the respective areas. For descriptions of signs and processes of soil degradation, see the below resources. 2. Determine the total area of land where soil productive capacity was substantially enhanced resp. restored by measures that you implemented. Such measures include e.g. the phytoremediation of polluted soils, the chemical remediation of saline soils and the recultivation of land used for surface mining. 3. Calculate the balance of degraded and rehabilitated land.		
5. Rating		
YES (= Dark Green) answer is given if: the enterprise has a written plan, available to all stakeholders, with land conservation and rehabilitation targets; AND steps have been implemented towards achieving these targets. PARTIAL (= Yellow) answer is given either if: the enterprise has a plan with set targets for land conservation and rehabilitation, but no steps have been yet made towards achieving these targets OR the enterprise has targets and has implemented steps for land conservation and rehabilitation, yet this has not been put into writing OR the enterprise has a plan with set targets for land conservation and rehabilitation and steps have been taken for achieving these targets, yet the plan is not available to all stakeholders. NO (= Red) answer is given if none of the above requirements have been met yet.		

6. Limitations of the indicator

The effectiveness of soil conservation and rehabilitation practices will strongly depend on local climatic and pedological conditions. Therefore, a careful assessment taking into account the local conditions will be needed to delineate those areas where measures really have a potential to be effective.

7. Sources of information

- FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm
- FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML
- FAO Land Resources. Soils and maps. <http://www.fao.org/nr/land/soils/en/>
- FAO. Land degradation assessment in drylands (LADA). <http://www.fao.org/nr/land/degradation/en/>
- International Union of Soil Sciences (IUSS). www.iuss.org
- UNESCO and IUSS. ISRIC World Soil Information. www.isric.org
- Soil Science Society of America. www.soils.org
- Soil Quality Pty Ltd (Australian Government et al.). <http://soilquality.org.au/factsheets>
- Joint Research Centre of the European Union, Soil Portal. <http://eusoils.jrc.ec.europa.eu/>
- International Erosion Control Association (IECA): www.ieca.org
- World Overview of Conservation Approaches and Technologies (WOCAT, hosted by the Bern University): www.wocat.net

Core Indicator Name		
Land conservation and rehabilitation practices (E 3.2.2)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Land Degradation (E 3.2)
1. Description		
This indicator refers to all practices that aim at preventing the loss of productive soils and at rehabilitating degraded soils.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that directly involve the use of soils. If the performance indicator for the sub-theme Land degradation has been calculated, it will not be necessary to apply this indicator in addition. In situations where the performance indicator cannot be applied, e.g. due to lack of data, the present practice indicator should be calculated.		
3. Unit of Measurement or Metric		
This indicator focuses on the practices and activities that were implemented to effectively conserve soil and/or rehabilitation areas used for or by the enterprise.		
4. How to Measure		
- Determine the total area on which soils are used by your enterprise. - List all activities and practices that the enterprise has implemented and that have a recognized potential to prevent soil degradation (in particular soil erosion) or to rehabilitate degraded soils. Note that many of these practices will also enhance soil quality (see the practice indicator for that sub-theme). Examples of best practices include: - Controlled application of organic fertilizer (manure, slurry, compost) to enhance soil organic matter content and thus (i) reduce surface runoff and the risk of water erosion and (ii) increase soil stability and reduce the risk of soil compaction. - Planting of living fences such as windbreaks and enhancement of soil surface roughness (e.g. by mulching) to prevent wind erosion. - Measures to increase soil coverage and thus erosion protection, such as green manure application, cover crops, diverse crop rotations, intercropping and agroforestry. - Soil and water conservation measures to reduce the the risk of soil and water erosion, e.g. terracing on slopes, contour farming, planting of protection strips; diversion ditches or cut-off drains, retention ditches or infiltration ditches, bunds and pits, barriers. - Better drainage, phyto-remediation and/or chemical remediation (e.g. using gypsum) to reduce soil salinity and lower soil pH. - Determine the share of the total area used where at least one effective measure is practiced.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): Conservation practices are in place in all sites threatened by soil degradation, and rehabilitation practices are in place in all sites that were previously degraded. Unacceptable practices (automatically lead to a “Red” SAFA score): Measures to conserve and rehabilitate soils are taken on less than 20% of the affected area.		

6. Limitations of the indicator

The effectiveness of soil conservation and rehabilitation practices will strongly depend on local climatic and pedological conditions. Therefore, a careful assessment taking into account the local conditions will be needed to delineate those areas where measures really have a potential to be effective.

7. Sources of information

- FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm
- FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML
- FAO Land Resources. Soils and maps. <http://www.fao.org/nr/land/soils/en/>
- FAO. Land degradation assessment in drylands (LADA). <http://www.fao.org/nr/land/degradation/en/>
- International Union of Soil Sciences (IUSS). www.iuss.org
- UNESCO and IUSS. ISRIC World Soil Information. www.isric.org
- Soil Science Society of America. www.soils.org
- Soil Quality Pty Ltd (Australian Government et al.). <http://soilquality.org.au/factsheets>
- Joint Research Centre of the European Union, Soil Portal. <http://eusoils.jrc.ec.europa.eu/>
- International Erosion Control Association (IECA): www.ieca.org
- World Overview of Conservation Approaches and Technologies (WOCAT, hosted by the Bern University): www.wocat.net

Core Indicator Name		
Net gain / loss of productive land (E 3.2.3)		
Dimension Environmental Integrity	Theme Land (E 3)	Sub-theme Land Degradation (E 3.2)
1. Description		
The subject of this indicator is the land balance of operations, i.e. it serves to determine whether a company causes a net loss of productive soils, or whether it contributes to net land rehabilitation.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The indicator is relevant for all enterprises that use land in ways that can enhance or degrade the productive (biological) capacity of soils. This definition will normally include arable crop production, livestock production and forestry. It also covers all activities that cause the loss of productive soils due to building activities (soil sealing) and contamination.		
3. Unit of Measurement or Metric		
This indicator captures the balance between rehabilitated land and degraded land on the enterprise's sites.		
4. How to Measure		
1. Determine the total area of land where a substantial or total loss of productive biological capacity has been caused by your operation. The loss of productive capacity can be approximated by assessing the degree of soil degradation – by water erosion, wind erosion, compaction, salinization, nutrient mining or chemical pollution – on the respective areas. For descriptions of signs and processes of soil degradation, see the below resources. 2. Determine the total area of land where soil productive capacity was substantially enhanced resp. restored by measures that you implemented. Such measures include e.g. the phyto-remediation of polluted soils, the chemical remediation of saline soils and the recultivation of land used for surface mining. 3. Calculate the balance of degraded and rehabilitated land.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): The land balance is positive, i.e. more land was rehabilitated than was degraded. Unacceptable practices (automatically lead to a “Red” SAFA score): Soils are completely destroyed (usually to construct buildings) without any compensatory measure and without any meaningful usage of the removed soil material.		
6. Limitations of the indicator		
Care must be taken to apply a meaningful weighting to the levels of rehabilitation resp. degradation. To that purpose, a proxy, such as crop yields, may be required. Otherwise, there will be a risk of e.g. 100 hectares of phyto-remediated saline land outweighing 100 hectares of land where soils were completely removed to build parking lots.		
7. Sources of information		
• FAO. Visual Soil Assessment Field Guides. www.fao.org/docrep/010/i0007e/i0007e00.htm • FAO & International Institute for Applied Systems Analysis (IIASA). Harmonized World Soil Database. webarchive.iiasa.ac.at/Research/LUC/External-World-soil-database/HTML		

- FAO Land Resources. Soils and maps. <http://www.fao.org/nr/land/soils/en/>
- FAO. Land degradation assessment in drylands (LADA). <http://www.fao.org/nr/land/degradation/en/>
- International Union of Soil Sciences (IUSS). www.iuss.org
- UNESCO and IUSS. ISRIC World Soil Information. www.isric.org
- Soil Science Society of America. www.soils.org
- Soil Quality Pty Ltd (Australian Government et al.). <http://soilquality.org.au/factsheets>
- Joint Research Centre of the European Union, Soil Portal. <http://eusoils.jrc.ec.europa.eu/>

Core Indicator Name		
Landscape/marine habitat conservation plan (E 4.1.1)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Ecosystem Diversity (E 4.1)
1. Description		
A landscape or marine habitat conservation plan is a written plan whose aim is the conservation, protection and restoration of wildlife habitat. Such a plan requires concrete and binding goals, the identification of taxa and habitats that require particular attention, an implementation plan, and efficient monitoring programs as well as the identification of communication and collaboration opportunities with stakeholders.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of supply chains and is relevant for enterprises of all sizes whose operations have an impact on landscape structure. This definition explicitly includes areas adjacent to and influenced by operations.		
3. Unit of Measurement or Metric		
This indicator serves to check whether the enterprise has a plan in place that targets the conservation and/or rehabilitation of a diversity of habitats in or adjacent to the site(s) of its operations.		
4. How to Measure		
1. Determine where the enterprise works in areas where habitats of endangered and/or threatened species, or habitats with high ecological value, have been identified. Relevant information will be available from public authorities in many countries. 2. Check whether the enterprise has a written and binding plan – available to all stakeholders, - with concrete targets and time-lines for habitat conservation and rehabilitation. 3. Check whether the enterprise has taken any documented steps towards the implementation and fulfillment of the targets within the expected time-frame.		
5. Rating		
YES (= Dark Green) answer is given if: • the enterprise has a written habitat conservation plan, available to all stakeholders, with exact targets and time-frames; AND • steps have been implemented towards achieving those targets. PARTIAL (= Yellow) answer is given either if: • the enterprise has a plan with exact targets, but no steps have been taken towards achieving those; OR • the enterprise has a plan and has taken steps towards its targets, however this has not been put into writing OR • the enterprise has a conservation plan and steps have been taken towards achieving its targets, however the plan is not available for all of the stakeholders. NO (= Red) answer is given if none of the requirements have been met as yet.		

6. Limitations of the indicator
7. Sources of information
• IUCN Commission on Ecosystem Management (CEM)- Red List of Ecosystems: http://www.iucn.org/about/union/commissions/cem/cem_work/tg_red_list/ EU Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora • Conservation International. Biodiversity Hotspots. www.conservation.org/where/priority_areas/hotspots/Pages/hotspots_main.aspx • Myers et al. (2000). Biodiversity hotspots for conservation priorities. http://server.ethz.ch/staff/af/Fi159/M/My042.pdf • FAO, 2009. Environmental impact assessment and monitoring in aquaculture

Core Indicator Name		
Ecosystem-enhancing practices (E 4.1.2)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Ecosystem Diversity (E 4.1)
1. Description		
This indicator refers to all practices that aim at enhancing functional relationships and processes within ecosystems by different actors in agriculture-based food chains. Examples of ecosystem services that benefit and at the same time are shaped by agricultural practices are nutrient cycling, pest regulation, pollination, maintenance of soil fertility, water quality and climate regulation. Many practices can potentially enhance these functionalities, such as greater diversity of plants and animals (including fish), soil coverage, cultivation of perennials, maintenance of semi natural habitats with native vegetation and flowers and creation of pest-suppressive conditions.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied on all levels of the supply chain and is relevant for enterprises of all sizes that use and/or directly affect the integrity and functioning of ecosystems.		
3. Unit of Measurement or Metric		
This indicator intends to capture all activities and practices that the enterprise has implemented which have effectively enhanced the functioning of ecosystems (and thus the provision of ecosystem services) on or adjacent to the analyzed enterprise's operations during the analyzed time-frame. The activities – when applicable – have to be practiced on the entire enterprise's site.		
4. How to Measure		
1. First decide which of below <i>examples</i> of “best practices”, whose implementation could play a more prominent role in enhancing the provision of ecosystem services, have been implemented (if applicable, i.e. if their application is feasible given the local climatic and ecological conditions). The operation may enlist additional practices with high ecosystem-enhancing potential. 2. Next decide which of the “unacceptable practices” - listed below under “Rating” - the operation has been engaged with.		
5. Rating		
Best practices (=Dark Green) if as many of the following have been implemented as feasible: <u>Cropland and livestock management</u> • Land-cover and land use change to more structurally complex and species-diverse systems, e.g. agroforestry, mixed crop-livestock systems, mixed rice-fish systems, intercropping, perennials, forest gardens, etc.; • Use of ecological approaches in tillage, soil fertility and disease, pest and weed control (e.g. trap cropping) – integrated pest management, integrated weed management, management of pollination, etc.; • Diversity-enhancing crop- and grassland management (e.g. diverse crop rotation), e.g. late and/or staggered mowing, no use of synthetic herbicides, maintenance of wildflower strips and		

ecological infrastructures such as stone and wood heaps, trees and hedgerows;

- Creation and maintenance of habitat networks that facilitate exchange between populations;
- Longer crop rotations, including nitrogen fixing species;
- Coverage of bare ground and other soil protection measures (see E.4.1.1)

Fisheries and aquaculture

- Use of by-catch devices

Forestry

- Establishment reps. conservation of multi-species tree stands;
- Creation and maintenance of wildlife habitat and of a species-diverse forest edge

Processing and marketing

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Unacceptable (=Red) if ANY of the following is practised:

- Annual monoculture cultivation and/or intensive aquaculture operations and/or high external input livestock systems (e.g. stocking densities that exceed the carrying capacity of local pastures by more than a factor of 2);
- Land use or land cover change from more complex systems, such as natural or semi-natural forests, grasslands and lakes, to arable land/aquaculture farms/single species operations;
- Reliance on off-farm synthetic inputs for both fertilizers and pesticides and/or complete reliance on off-farm feed.

6. Limitations of the indicator

7. Sources of information

- www.fao.org/agriculture/crops/news-events-bulletins/theme/biodiversity-and-ecosystem-services/it/
- FAO Global Soil Partnership: <http://www.fao.org/globalsoilpartnership/en/>
- [Convention on Biological Diversity](http://www.cbd.int/)
- [Bioversity International](http://www.biodiversityinternational.org/)
- [Platform for Agrobiodiversity Research](http://www.agrobiodiversityresearch.org/)
- [Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services: http://www.ipbes.net/](http://www.ipbes.net/)
- The Economics of Ecosystems and Biodiversity (TEEB). www.teebweb.org
- UNEP Millennium Ecosystem Assessment. www.unep.org/maweb/en/index.aspx
- [Power A.G. 2010. Ecosystem services and agriculture: tradeoffs and synergies. Phil. Trans. R. Soc. B 27 September 2010 vol. 365 no. 1554 2959-2971. At](#)
- [FAO, 2009. Environmental impact assessment and monitoring in aquaculture](#)

Core Indicator Name		
Structural diversity of ecosystems (E 4.1.3)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Ecosystem Diversity (E 4.1)
1. Description		
Many ecosystem services, such as biological pest control and pollination services, depend on the movement of organisms across the agricultural landscape. Hence, the spatial structure of the landscape strongly influences the magnitude of these services to agricultural ecosystems. In complex landscapes, natural enemies and pollinators move among natural and semi-natural habitats that provide them with refuge and resources that may be scarce in crop fields. Thus, this indicator looks at the extent of structural diversity in landscapes, including aquatic habitats.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is relevant for enterprises of all sizes and types whose operations are based on or affect ecosystems, both on used areas and land adjacent to them.		
3. Unit of Measurement or Metric		
This indicator asks for the share of high structural diversity of habitats on areas where the analyzed enterprise is operating (including aquatic habitats) during the analyzed time-frame.		
4. How to Measure		
1. Determine the total area of the ecosystems used in your operations and directly affected by these operations. 2. Determine the share of land resp. aquatic and marine habitat, where the structural diversity of habitats – aquatic and terrestrial – is at least as high as in natural ecosystems of the region. Structural diversity pertains to the vertical layering and horizontal heterogeneity of habitats at the patch and landscape levels.		
5. Rating		
Best (= Dark Green) score is given if Structural diversity on the complete utilized and adjacent land is at least as high as in natural ecosystems of the same region. Polyculture is practised both in land and in aquatic (i.e. multi-trophic) operations. Unacceptable (= Red) score is given if All utilized and adjacent land/aquatic habitat is covered by monocultures with a single habitat layer and no substantial horizontal heterogeneity, although the landscape would be structurally diverse without human influence.		
6. Limitations of the indicator		
The question of what is a sufficiently high structural diversity can be difficult to answer, as scientific and normative aspects mix when it comes to biodiversity targets. Often, either the natural climax vegetation of a region (under current climate) is seen as an ideal. However, in other instances, a maximum level of structural diversity, or a certain level that is typical for a traditional cultural landscape may be considered as ideal.		

7. Sources of information

- [FAO Biodiversity website: http://www.fao.org/biodiversity/en/](http://www.fao.org/biodiversity/en/)
- [Convention on Biological Diversity: http://www.cbd.int/convention/](http://www.cbd.int/convention/)
- [Bioversity International: http://www.biodiversityinternational.org/](http://www.biodiversityinternational.org/)
- [Platform for Agrobiodiversity Research: http://agrobiodiversityplatform.org/](http://agrobiodiversityplatform.org/)
- [The Economics of Ecosystems and Biodiversity \(TEEB\) www.teebweb.org](http://www.teebweb.org)
- UNEP Millennium Ecosystem Assessment: www.unep.org/maweb/en/index.aspx
- Boller, Häni & Poehling (2004): *Ecological Infrastructures: Ideabook on Functional Biodiversity at the Farm Level*: www.iobc-wprs.org/pub/IOBC_Ideabook_preview.pdf

Core Indicator Name		
Ecosystem connectivity (E 4.1.4)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Ecosystem Diversity (E 4.1)
1. Description		
The health and integrity of the populations of many organisms depend on the possibility to move through the landscape and exchange genetic material with other populations. This possibility in turn depends on landscape structure, more precisely on whether habitats are sufficiently close to each other or connected via step-stone habitats and corridors. Furthermore, many species require an ensemble of different habitats for different functions, e.g. for nesting, mating and feeding. Hence, both the connectivity and “completeness” of habitats in a landscape are important determinants of biodiversity. This applies to terrestrial and marine habitats alike.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labor and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of supply chains and is relevant for enterprises of all sizes whose operations have an impact on landscape structure.		
3. Unit of Measurement or Metric		
This indicator focuses on the share of well-connected habitats in the areas where the analyzed enterprise is operating (including aquatic habitats) during the analyzed time-frame.		
4. How to Measure		
1. Determine all sites and their respective areas, where your operations impact on landscape structure. 2. For all of these areas, analyze the proximity of similar valuable habitats (forests, wetlands, etc.) to the nearest habitat of the same type. If possible, also analyze whether a diversity of structures is present in all parts of the landscape. Such landscape analysis can be done on-site using visual rating schemes, or by means of remote sensing (using aerial photographs or satellite imagery with sufficiently high spatial resolution). To rate the connectivity of the landscape, key taxa, whose mobility patterns are known, have to be selected. 3. For each area, calculate the share of the landscape that can be considered to be ecologically well-connected.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): All areas at all sites used can be considered to be ecologically well-connected. Unacceptable practices (automatically lead to a “Red” SAFA score): • Less than 20% of the areas or of all sites used can be considered to be ecologically well-connected. • The activities of the company have contributed substantially to reducing the connectivity and structural complexity of the landscape.		

6. Limitations of the indicator

Connectivity/fragmentation and their impact on species meta population dynamics is often studied at the landscape scale rather than at the farm scale, which does not have an ecological relevance. The connectivity of habitats in a landscape will have different effects, depending on the considered species. Any measure serving the quantification of landscape connectivity will necessarily be a compromise among the needs of different species.

7. Sources of information

1. CBD (2006). Review of experience with ecological networks, corridors and buffer zones.
www.cbd.int/doc/publications/cbd-ts-23.pdf
2. Council of Europe: Ecological networks.
www.coe.int/t/dg4/cultureheritage/nature/econetworks/default_en.asp
3. European Commission. The Natura 2000 network.
<http://ec.europa.eu/environment/nature/natura2000/>

Core Indicator Name		
Land–use and land-cover change (E 4.1.5)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Ecosystem Diversity (E 4.1)
1. Description		
Land-use and land-cover change (LUCC or LULCC) is a general term for the human modification of Earth's terrestrial surface. Current rates, extents and intensities of LULCC are greater than ever in history, driving unprecedented changes in ecosystems and creating environmental concerns of human populations. In the context of this indicator, land use refers to human activities stemming from agriculture, forestry, fisheries and industrial activities that alter processes using land surfaces, whereas land cover refers to the physical and biological cover over the surface of land, including water, vegetation, bare soil, and/or artificial structures.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labor and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is relevant for all land operations of all sizes and types, including aquaculture operations, whose operations have an impact on land use and land cover.		
3. Unit of Measurement or Metric		
This indicator is for checking whether natural or near-natural habitats (e.g. wetlands, primary forests, grasslands, protected waterways, mangrove forests) or structurally complex land use systems (e.g. grasslands, agroforestry, polycultures) have been replaced by ecologically less valuable forms of land use land cover due to your operations during the last 20 years.		
4. How to Measure		
1. Delineate sites where your operations impact on land use and land cover, both on-site and off-site. For each site, quantify and delineate the area affected by your operations. 2. For all identified sites and areas, determine whether there have been any conversions from ecologically valuable to less valuable habitats caused by your operations during the past 20 years. Cultivated areas have to be included in this analysis; check for these areas, whether the structural and species diversity or the productivity of vegetation have been reduced due to your operations (= area 1) 3. Equally, determine sites and areas where your operations have contributed to LULCC that has enhanced ecological quality (= area 2). 4. Calculate the net LULCC by subtracting areas with “negative LULCC” from those with “positive LULCC” (= area 2 minus area 1).		
5. Rating		
Best (= Dark Green) score is given if		
The net LULCC caused by the enterprise is positive (more “upgrading” than “downgrading” of habitat) AND the enterprise has not caused any ecologically degrading LULCC off-site.		
Yellow score is given if:		
The enterprise has not caused any ecologically degrading LULCC.		

Unacceptable (= **Red**) score is given if

Your enterprise has caused ecologically degrading LULCC, without any ecological compensation measures either on-site or off-site AND

The net LULCC caused by your enterprise is negative (more “downgrading” than “upgrading” of habitat).

6. Limitations of the indicator

The ecological value of a certain habitat in a certain region depends on factors that cannot always be quantified, and on the norms and values of the stakeholders involved. Therefore, stakeholder and expert opinions should be considered when it comes to rating the net effects of any particular LULCC.

7. Sources of information

- [FAO: Land Cover: ftp://ftp.fao.org/docrep/fao/011/i0197e/i0197e13.pdf](ftp://ftp.fao.org/docrep/fao/011/i0197e/i0197e13.pdf)
- [FAO: Global forest land-use change: http://www.fao.org/docrep/017/i3110e/i3110e00.htm](http://www.fao.org/docrep/017/i3110e/i3110e00.htm)
- [User Manual for the JRC Land Cover/Use Change Validation Tool: http://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_9_politikalar/1_9_10_tarim_balikcilik/ser_manual_JRC.pdf](http://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_9_politikalar/1_9_10_tarim_balikcilik/ser_manual_JRC.pdf)
- [European Commission: Green Infrastructure Strategy: http://ec.europa.eu/environment/nature/ecosystems/index_en.htm](http://ec.europa.eu/environment/nature/ecosystems/index_en.htm)

Core Indicator Name		
Species conservation target (E 4.2.1)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Species Diversity (E 4.2)
1. Description		
Species conservation target refers to the existence of a written plan with exact objectives, targets, action points and time-lines for the conservation, protection and rehabilitation of rare and / or endemic species. Setting and implementing a conservation target requires: research and baseline data collection of the local target species and their habitats (list of species and production of distribution maps based on field surveys); mitigation of human-wildlife conflict; working with communities for creating sustainable livelihoods and increasing protection of critical wildlife areas.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labor and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain, of any size whose operations are in or adjacent to areas where rare and/or endemic species have been identified.		
3. Unit of Measurement or Metric		
This indicator asks whether the enterprise has investigated if rare and endemic species thrive in or adjacent to the areas of their operations and, if that is the case, whether they have set a target on the conservation and/or rehabilitation of rare and/or endemic species and their habitats.		
4. How to Measure		
1. Determine if the operations are in or adjacent to areas where habitats for rare and/or endemic species have been identified. 2. If so, assess whether the operation has a written and binding plan – public and available to all stakeholders - with exact objectives, targets and time-lines for the conservation and rehabilitation of these species. 3. If such a plan exists, check whether the operation has made exact steps into the implementation and fulfillment of the objectives within the expected time-frame.		
5. Rating		
YES (= Dark Green) answer is given if: the enterprise has written habitat/species conservation targets, available to all stakeholders, with exact objectives and time-frames; AND steps have been implemented towards achieving these targets. PARTIAL (= Yellow) answer is given either if: the enterprise has a plan with exact targets, but no steps have been made towards achieving those; OR the enterprise has a conservation target and has been implementing steps towards its implementation, however this has not been put into writing OR the enterprise has a conservation target and steps have been made towards achieving this target, however the plan is neither public nor available to all stakeholders.		

NO (=Red) answer is given if:

none of the above requirements have been met as yet, including that no investigation has been undertaken to find out if rare and/or endemic species are in or adjacent to the areas of the operations.

6. Limitations of the indicator

Both wild and domesticated species need to be considered, though one has to acknowledge the limited role of one single operation towards the identification, conservation and eventual rehabilitation of rare and endemic species. In case of domesticated plants, an example for such efforts could be implemented through the establishment of an on-site seed bank. Nevertheless, partnerships with research institutions, universities, government agencies and other operations within the same area are crucial for any successful conservation plan.

7. Sources of information

- [FAO 2010. The Second Report on the State of the World's Plant Genetic Resources for Food and Agriculture: http://www.fao.org/docrep/013/i1500e/i1500e.pdf](http://www.fao.org/docrep/013/i1500e/i1500e.pdf)
- FAO 2007: Country Reports on SOW-AnGR
- PAR and FAO, 2010. Biodiversity for Food and Agriculture. http://www.fao.org/fileadmin/templates/biodiversity_paia/PAR-FAO-book_lr.pdf
- Atlas of the Biosphere, University of Wisconsin. www.sage.wisc.edu/atlas
- Global Biodiversity Information Facility (GBIF). www.gbif.org
- CITES species database: <http://www.cites.org/eng/resources/species.html>
- IUCN red list of Threatened Species: <http://www.iucnredlist.org/>

Core Indicator Name		
Species conservation practices (E 4.2.2)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Species Diversity (E 4.2)
1. Description		
This indicator refers to all practices that aim at the protection and rehabilitation of wild species in agriculture-based food chains. Many practices can contribute to this goal, such as maintaining a diversity of plants and animals (including fish) in production, the cultivation structurally diverse stands of perennials, the protection of structures and habitats needed by wildlife (e.g. bird nesting aids and insect nesting boxes) and the establishment of habitats within cultivated landscapes that can serve as refuge to animals.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the value chain and is relevant for operations of all sizes that manage and influence agro-ecosystems (including forests and marine ecosystems).		
3. Unit of Measurement or Metric		
This indicator intends to capture all activities and practices that the operation has implemented which effectively protect and rehabilitate populations of wild plants and animals on or adjacent to the analyzed enterprise's operations during the analyzed time-frame.		
4. How to Measure		
1. Delineate all sites and areas where your operations shape agro-ecosystems, including forests and marine ecosystems, and where they influence natural and near-natural ecosystems. Then decide which of the below <i>examples</i> of “best practices” whose implementation can support the protection and rehabilitation of wild species and their populations are appropriate in these areas. The operation may enlist additional practices with high wild species conservation potential. • Land cover and land use change towards more structurally complex and species-diverse systems, e.g. agroforestry, mixed crop-livestock systems, mixed rice-fish systems, intercropping, perennials, forest gardens, etc.; • Use of ecologically-founded approaches in tillage, fertilization, and disease, pest and weed control (e.g. trap cropping) – integrated pest management, integrated weed management etc.; • Diversity-enhancing crop- and grassland management, e.g. late and/or staggered mowing, no use of conditioners (as they kill invertebrates), maintenance of wildflower strips and ecological infrastructures such as stone and wood heaps, trees and hedgerows; • Creation and maintenance of habitat networks that facilitate exchange between populations; • Establishment reps. conservation of multi-species tree stands; • Creation and maintenance of wildlife habitat and of a species-diverse forest edge; • Installation of nesting aids.		

2. Next, identify those practices that have been implemented, describe their extent and assess their efficacy. At this stage, advice from experts and local stakeholders with profound knowledge of local ecosystems may be sought.

5. Rating

“**Dark Green**” SAFA score is reached if (all conditions must be fulfilled):

All feasible conservation and rehabilitation practices have already been implemented and for some of these, positive effects can be proven.

Unacceptable practices (automatically lead to a “**Red**” SAFA score):

Less than 20% of the feasible practices have been implemented OR the enterprise’s activities have contributed to deteriorating conditions for wildlife conservation and rehabilitation.

6. Limitations of the indicator

The efficacy of practices that are meant to protect and rehabilitate wildlife can be difficult to determine, and therefore it may be hard to attribute conservation successes and failures to any particular practice. Expert advice should be sought in cases of doubt.

Conservation and rehabilitation practices must fit into the local climatic and ecological context. For example, the dimension, construction and placement of bird nesting aids have to be appropriate for local species.

7. Sources of information

- [FAO Biodiversity website: www.fao.org/biodiversity/en/](http://www.fao.org/biodiversity/en/)
- [Convention on Biological Diversity: www.cbd.int/convention/](http://www.cbd.int/convention/)
- CITES species database: <http://www.cites.org/eng/resources/species.html>
- [Bioversity International: www.biodiversityinternational.org/](http://www.biodiversityinternational.org/)
- [Platform for Agrobiodiversity Research: http://agrobiodiversityplatform.org/](http://agrobiodiversityplatform.org/)
- IUCN Red list of threatened species. www.iucnredlist.org
- The Economics of Ecosystems and Biodiversity (TEEB). www.teebweb.org
- UNEP Millennium Ecosystem Assessment. www.unep.org/maweb/en/index.aspx
- Power A.G. 2010. Ecosystem services and agriculture: tradeoffs and synergies. *Phil. Trans. R. Soc. B* 27 September 2010 vol. 365 no. 1554 2959-2971.
<http://rstb.royalsocietypublishing.org/content/365/1554/2959.full>

Core Indicator Name		
Diversity and abundance of key species (E 4.2.3)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Species Diversity (E 4.2)
1. Description		
The subjects of this indicator are (i) threatened and vulnerable wild species and (ii) invasive species. The indicator assesses the state of diversity and abundance of these species in order to reflect the integrity of the ensemble of species native to the sites where the analyzed enterprise operates.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the value chain and is relevant for operations of all sizes that manage and influence agro-ecosystems (including forests and marine ecosystems).		
3. Unit of Measurement or Metric		
This indicator serves to determine how diversity and abundance of threatened and vulnerable wild species on the one hand, and invasive species on the other, have developed in and adjacent to the analyzed enterprise's operations during the analyzed time-frame.		
4. How to Measure		
1. Delineate all sites and areas where your operations shape agro-ecosystems, including forests and marine ecosystems, and where they influence natural and near-natural ecosystems. 2. Then investigate which wild species in these areas are threatened or vulnerable. Through field surveys, estimate the diversity and abundance of key species, to establish a baseline. Local conservation experts and organizations should be involved in this step. If previous studies, e.g. from public biodiversity monitoring projects, are available, use those. 3. Next, monitor the development of these species through targeted conservation measures and monitor the changes in their populations during the analyzed timeframe. Where monitoring data exist, an ex-post assessment of past developments will be possible as well. 4. Monitor the development of populations of introduced species to make sure they do not become invasive.		
5. Rating		
Best (= Dark Green) score is given if: • The diversity and populations of the monitored threatened and vulnerable species have increased, without imbalances in the ecosystem AND • The populations of introduced alien species have decreased AND • Species selection and monitoring methodology have been approved by public or private conservation specialists or organizations. Unacceptable (= Red) score is given if : • You have no information about the development of populations of threatened, vulnerable and introduced species in ecosystems managed or influenced by your operations OR • Populations of threatened and vulnerable species have decreased and introduced species have		

become invasive AND this can partly be attributed to the impact of your operations.
6. Limitations of the indicator
Monitoring the populations of all threatened, vulnerable and introduced species will not be possible in many places. Therefore, a scientifically and practically founded selection of key species that will then be monitored, will very likely be necessary. This selection, as well as the scientifically correct species monitoring, requires profound knowledge and substantial time. Hence, the cooperation of public and private conservation organizations should be ensured in such activities.
7. Sources of information
• FAO Biodiversity website: www.fao.org/biodiversity/en • Convention on Biological Diversity: www.cbd.int/convention • Bioversity International: www.biodiversityinternational.org • Platform for Agrobiodiversity Research: http://agrobiodiversityplatform.org/ • IUCN Red list of threatened species: www.iucnredlist.org • Inter-Agency Liaison Group on Invasive Alien Species: http://www.cbd.int/invasive/lg

Core Indicator Name		
Diversity of production (E 4.2.4)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Species Diversity (E 4.2)
1. Description		
The indicator Diversity of production refers to diversification strategies that result in production systems, such as poly-cultures, with higher diversities of crops, trees, animals, and fish species, as well as in integrated systems, such as agroforestry, mixed rice-fish systems, etc.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labor and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at the primary production level of agriculture-based value chains and is relevant for operations of all sizes whose operations are based on agro-ecosystems (including forests and aquatic ecosystems).		
3. Unit of Measurement or Metric		
This indicator focuses on the share of utilized area where a diverse crop rotation and/or several species are kept / produced at the same time during the analyzed time-frame.		
4. How to Measure		
1. Quantify the total area where your operation uses agro-ecosystems. For animal production, the number of animals and annual turnover is an alternative measure of production volume. 2. Determine all sites and quantify their respective areas, where your operations practice diverse crop rotations and where several plant/tree/animal/fish species are produced at the same time. What can be considered as “diverse” should be determined with local stakeholders and with experts. Published reports and papers on agro-biodiversity can serve to provide orientation. 3. Calculate the share of these high-diversity areas in your total utilized area resp. the share of diverse animal production over your total production volume.		
5. Rating		
“Dark Green” SAFA score is reached if either of the following is fulfilled: All of the utilized area is either covered with diverse crop rotations or has a polyculture / multi-trophic system in place, and all animal production is characterized by a high species diversity. Unacceptable practices (automatically lead to a “Red” SAFA score): • Crops are grown in monoculture, without any crop rotation, or only in a two-year constant rotation with the same two crops, although alternative crops would be available. • Highly intensive single-species farming, forestry, fisheries operations and plantations.		
6. Limitations of the indicator		
...		
7. Sources of information		
• FAO Biodiversity website: www.fao.org/biodiversity/en • Convention on Biological Diversity: www.cbd.int/convention • Platform for Agrobiodiversity Research: http://agrobiodiversityplatform.org/ • PAR and FAO, 2010. Biodiversity for Food and Agriculture. http://www.fao.org/fileadmin/templates/biodiversity_paia/PAR-FAO-book_lr.pdf • Atlas of the Biosphere, University of Wisconsin. www.sage.wisc.edu/atlas • Global Biodiversity Information Facility (GBIF). www.gbif.org		

Core Indicator Name		
Wild genetic diversity enhancing practices (E 4.3.1)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Genetic Diversity (E 4.3)
1. Description		
This indicator refers to all practices that aim at enhancing the genetic diversity within wild plant and animal species in agriculture-based food chains. Genetic diversity is crucial for long-term survival of every species and their capacity to adjust to any changes.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprise of all sizes which have an influence on wild biodiversity.		
3. Unit of Measurement or Metric		
This indicator intends to capture all activities and practices that the enterprise has implemented which have enhanced the genetic diversity of wild species on or adjacent to the analyzed enterprise's operations during the analyzed time-frame.		
4. How to Measure		
1. First, identify and delineate all sites and areas where your operations have an impact on wild biodiversity in general, and on genetic diversity of wild species in particular. The help of local stakeholders and conservation experts should be sought at this stage. 2. Then, decide which of below <i>examples</i> of “best practices”, whose implementation can help to conserve or enhance wild species’ genetic diversity, have been implemented (if applicable, i.e. if their application is feasible given the local climatic and ecological conditions). The operation may enlist additional practices with a potential to enhance the genetic diversity within wild species. 3. Next decide which of the “unacceptable practices” listed below under “Rating” the operation has been engaged with.		
5. Rating		
Best practices (=Dark Green) if as many of the following practices as are feasible for the company have been implemented: <u>Cropland and livestock management</u> • Land cover and land use change to more structurally complex and species-diverse systems, e.g. agroforestry, mixed crop-livestock systems, mixed rice-fish systems, intercropping, perennials, forest gardens, etc. • Use of ecologically-founded approaches in tillage, fertilization and disease, pest and weed control (e.g. trap cropping) – integrated pest management, integrated weed management etc.; • Diversity-enhancing crop- and grassland management, e.g. late and/or staggered mowing, no use of conditioners (as they kill invertebrates), maintenance of wildflower strips and ecological infrastructures such as stone and wood heaps, trees and hedgerows;		

- Creation and maintenance of habitat networks that facilitate exchange between populations;
- In-situ conservation of genetic diversity;

Fisheries and aquaculture

- Use of extra escape panels to crab traps, extra wide and stiff netting instead of the recommended netting by law that allows more small fish to escape, use of techniques such as long hauling that reduces by-catch;
- Fishing with special equipment (e.g. pound netting) that do not drag the ground and do not disturb natural habitats;

Forestry

- Establishment reps. conservation of multi-species tree stands;
- Creation and maintenance of wildlife habitat and of a species-diverse forest edge;

Processing and marketing



Unacceptable (=Red) if ANY of the following is practiced (regardless if any of the above-mentioned Best practices is also implemented):

- Monoculture cultivation and/or intensive livestock/aquaculture operations (e.g. stocking densities that exceed the carrying capacity of local pastures/aquaculture operations (dung units for landless systems) by more than a factor of 2);
- Land use or land cover change from more complex systems, such as natural or semi-natural forests and lakes, to arable land/aquaculture farms/single species operations;
- No habitat left aside for wildlife, e.g. buffer strips, wildflower strips;
- Capturing/buying any fish species from stocks that are endangered;
- All production of crops is based on a single genetic lineage/all production of animals is based on a single genetic lineage of an exotic breed.

6. Limitations of the indicator

Whether practices to conserve or enhance genetic diversity have been effective can only be stated with certainty through laboratory analysis. Where these are not possible for technical or financial reasons, proxies (such as differing phenotypes of populations) need to be used.

7. Sources of information

- [FAO Biodiversity website: www.fao.org/biodiversity/en](http://www.fao.org/biodiversity/en)
- [Convention on Biological Diversity: www.cbd.int/convention](http://www.cbd.int/convention)
- [Bioversity International: www.biodiversityinternational.org](http://www.biodiversityinternational.org)
- [Platform for Agrobiodiversity Research: http://agrobiodiversityplatform.org/](http://agrobiodiversityplatform.org/)
- FAO DAD-IS: <http://dad.fao.org/>
- IUCN Red list of threatened species: www.iucnredlist.org
- [The Economics of Ecosystems and Biodiversity \(TEEB\): www.teebweb.org](http://www.teebweb.org)

Core Indicator Name		
Agro-biodiversity in-situ conservation (E 4.3.2)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Genetic Diversity (E 4.3)
1. Description		
This indicator refers to the protection, in-situ conservation and rehabilitation of the genetic diversity of domesticated plant and animal and aquaculture fish species in agriculture-based food chains. Genetic resources hold the key to increasing food security and improving livelihoods. Conservation of genetic diversity means the on-farm selection of high-quality seeds, their propagation and multiplication, and adequate storage (for crops); the conservation of endangered breeds in their traditional production systems (for animals); ecologically safe fishery technologies and environmentally sound aquaculture practices (for fisheries); developing seed centers, and establishing the conservation of priority species (for forestry).		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes with a potential to contribute to in-situ conservation of agro-biodiversity. Processing and marketing operations can also have an impact on the genetic diversity of domesticated and aquaculture species through their purchasing policies, thus this indicator is also relevant to them.		
3. Unit of Measurement or Metric		
For plants: This indicator measures the share of production from other than the most common genetic lineage, for each used species, in the analyzed enterprise's operations during the analyzed time-frame. For animals: This indicator measures the share of production from other than the most common exotic breed or the most common genetic lineage within exotic breed where no locally adapted breeds exist for each used species, in the analyzed enterprise's operations during the analyzed time-frame.		
4. How to Measure		
1. Identify all species of plants and animals (including fish) kept in or for your operations. 2. Determine for each species, what share the most common genetic lineage of crops/ the most common exotic breed or the most common genetic lineage within exotic breed where no locally adapted breeds exist occupies from the total lineages/breeds you produce/keep. 3. Subtract this share from 100%.		
5. Rating		
Best (= Dark Green) score is given if For all species, your main genetic lineage of crops /of exotic breed or the most common genetic lineage within exotic breed where no locally adapted breeds exist does not represent more than 50%. The threshold for a too high genetic uniformity should be determined with the help of experts and for each individual species.		

Unacceptable (= **Red**) score is given if

The common lineage/exotic breed or one genetic lineage within exotic breed where no locally adapted breeds exist occupies 100% of lineages/breeds, in all species used.

6. Limitations of the indicator

Species diversity could be confused with genetic diversity: an operation may be very rich in species, but very poor in within-species genetic diversity when each species only occurs in the form of a single genetic lineage.

7. Sources of information

- [FAO Biodiversity website: http://www.fao.org/biodiversity/en/](http://www.fao.org/biodiversity/en/)
- [FAO – Biodiversity to nurture people: http://www.fao.org/docrep/004/V1430E/V1430E04.htm](http://www.fao.org/docrep/004/V1430E/V1430E04.htm)
- [International Treaty on Plant Genetic Resources for Food and Agriculture: http://www.planttreaty.org/](http://www.planttreaty.org/)
- [FAO - Country Reports on the State of Animal Genetic Resources: ftp://ftp.fao.org/docrep/fao/010/a1250e/annexes/CountryReports/CountryReports.pdf](ftp://ftp.fao.org/docrep/fao/010/a1250e/annexes/CountryReports/CountryReports.pdf)
- [FAO – Seed diversity of crops and varieties: ftp://ftp.fao.org/docrep/fao/010/ai502e/ai502e02.pdf](ftp://ftp.fao.org/docrep/fao/010/ai502e/ai502e02.pdf)
- [FAO DAD-IS – Domestic Animal Diversity Information System: http://dad.fao.org/](http://dad.fao.org/)
- [Global Plan for Action for Animal Genetic Resources: http://www.fao.org/docrep/010/a1404e/a1404e00.htm](http://www.fao.org/docrep/010/a1404e/a1404e00.htm)

Core Indicator Name		
Locally adapted varieties/breeds (E 4.3.3)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Genetic Diversity (E 4.3)
1. Description		
Farmers over time have developed plant varieties and animal breeds that are particularly adapted to local conditions, including social, economic, and ecological conditions, and that incorporate a large degree of intraspecific/within breed genetic diversity. Locally adapted varieties and locally adapted and/rare breeds are crucial in maintaining food security, especially in areas with little control over crop growth conditions. They are also a foundation of resilient local food systems. This indicator also includes the in-situ preservation of rare and traditional varieties and breeds.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the value chain and is relevant for operations of all sizes that are involved in crop or animal production. Processing and marketing operations also can have an impact on the conservation and promotion of locally adapted, rare or traditional varieties/breeds through their purchasing policies, thus this indicator is also relevant to them.		
3. Unit of Measurement or Metric		
For plants: This indicator measures the share of production accounted for by locally adapted varieties, and by rare and traditional (heirloom) varieties during the analyzed time-frame. For animals: This indicator measures the share of production accounted for by locally adapted and/or rare breeds during the analyzed time-frame.		
4. How to Measure		
1. Identify and delineate all sites and areas where your operation is involved in animal and crop production (including aquaculture), or where such production is influenced by the practices of your operation. 2. Determine what is the share of production (by area or animal number) accounted for by (i) locally adapted plant varieties or animal breeds, (ii) rare and (iii) traditional (heirloom) crop varieties and livestock breeds.		
5. Rating		
Best (= Dark Green) score is given if: At least 50% of your cultivated lands are used for locally adapted, rare or traditional varieties.; At least 50% of your animal population consists of locally adapted or rare breeds; Unacceptable (= Red) score is given if: You do not have any locally adapted, rare or traditional varieties and/or breeds.		
6. Limitations of the indicator		
Lack of knowledge about what constitutes locally adapted varieties/breeds, as well as lack of access to such varieties and breeds may be a limitation. Furthermore, a variety or breed may have contradicting characteristics, e.g. it can be well-adapted to a certain climate without being tradi-		

tional or rare. Introduced better-adapted breeds and varieties may even threaten the continuation of traditional production practices and the existence of traditional breeds. In such situations, a prioritization involving local stakeholders and experts will be necessary.

7. Sources of information

- [FAO Biodiversity website: http://www.fao.org/biodiversity/en/](http://www.fao.org/biodiversity/en/)
- [FAO – Biodiversity to nurture people: http://www.fao.org/docrep/004/V1430E/V1430E04.htm](http://www.fao.org/docrep/004/V1430E/V1430E04.htm)
- [International Treaty on Plant Genetic Resources for Food and Agriculture: http://www.planttreaty.org/](http://www.planttreaty.org/)
- [FAO – Seed diversity of crops and varieties: ftp://ftp.fao.org/docrep/fao/010/ai502e/ai502e02.pdf](ftp://ftp.fao.org/docrep/fao/010/ai502e/ai502e02.pdf)
- [FAO DAD-IS – Domestic Animal Diversity Information System: http://dad.fao.org/](http://dad.fao.org/)
- [Global Plan for Action for Animal Genetic Resources: http://www.fao.org/docrep/010/a1404e/a1404e00.htm](http://www.fao.org/docrep/010/a1404e/a1404e00.htm)
- Report of a consultation on the definition of breed categories ([CGRFA/WG-AnGR-7/12/Inf.7](#)): <http://www.fao.org/docrep/meeting/028/mg538e.pdf>

Core Indicator Name		
Genetic diversity in wild species (E 4.3.4)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Genetic Diversity (E 4.3)
1. Description		
The importance of the abundance and diversity of wild species cannot be understated. Pest resistance genes are rare and predominantly found in unimproved varieties or wild accessions – the same can be said about pathogen resistance, thus <i>wild</i> ancestors and relatives are the keys to <i>genetic diversity</i>. Microorganisms, along with invertebrates, are also invaluable contributors to the ecosystems: they pollinate crops and trees, recycle nutrients in soils, ferment bread and cheese, help animals digest otherwise indigestible forage and, with proper management, can provide natural protection against plant pests. Successful measures to preserve wild species diversity include encouraging pollinator populations by conserving diverse cropping patterns on their farms; employing predator insects; leaving stubble in the field after harvest.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the supply chain and is relevant for enterprises of all sizes which have an influence on wild genetic biodiversity.		
3. Unit of Measurement or Metric		
This indicator measures the share of operations where there is a high genetic diversity in non-utilized plants, animals and microorganisms.		
4. How to Measure		
1. Identify and delineate the sites and areas where your operations have an influence on the genetic diversity of wild species. 2. Determine what is the share of production area and / or sites where there is a high diversity of non-utilized plants. 3. Determine what is the share of production area and / or sites where there is a high diversity of earthworms (other taxa may be used as well).		
5. Rating		
Best (= Dark Green) score is given if On at least 5% of your lands, non-utilized plants are growing AND there is a high diversity of chosen taxa. Unacceptable (= Red) score is given if You do not have even 1% of land with non-utilized plants AND/OR the diversity of the chosen taxa is low.		
6. Limitations of the indicator		
Genetic diversity within species can only be analyzed with certainty through laboratory analysis. Where these are not possible for technical or financial reasons, proxies (such as differing phenotypes		

of populations) need to be used.

7. Sources of information

- [FAO – Biodiversity to nurture people: http://www.fao.org/docrep/004/V1430E/V1430E04.htm](http://www.fao.org/docrep/004/V1430E/V1430E04.htm)
- [FAO – Microorganisms and invertebrates: http://www.fao.org/fileadmin/templates/nr/documents/CGRFA/factsheets_microorganism_en.pdf](http://www.fao.org/fileadmin/templates/nr/documents/CGRFA/factsheets_microorganism_en.pdf)
- [Caliskan M. \(Ed.\), 2012. Genetic Diversity in Microorganisms. InTech.: http://www.intechopen.com/books/genetic-diversity-in-microorganisms](http://www.intechopen.com/books/genetic-diversity-in-microorganisms)
- McCarry D. A Methodology of a Visual Soil - Field Assessment Tool: ftp://ftp.fao.org/agl/agll/lada/vsfast_methodology.pdf
- The Second Report on The State of the World's Plant Genetic Resources for Food and Agriculture, 2010: <http://www.fao.org/docrep/013/i1500e/i1500e00.htm> The State of the World's Animal Genetic Resources for Food and Agriculture, 2007. <http://www.fao.org/docrep/010/a1250e/a1250e00.htm>
- Commission on Genetic Resources for Food and Agriculture: www.fao.org/nr/cgrfa/

Core Indicator Name		
Saving of seeds and breeds (E 4.3.5)		
Dimension Environmental Integrity	Theme Biodiversity (E 4)	Sub-theme Genetic Diversity (E 4.3)
1. Description		
This indicator refers to the practice of on-farm animal breeding with locally adapted or rare breeds as well as to the practice of saving seeds or other reproductive materials (e.g. tubers) for use from year to year for annuals, and of nuts, tree fruits and berries for perennials and trees. Farmers and gardeners have been saving traditional varieties and selecting breeding stock with particular performance traits that were adapted to their local conditions, including social, economic, and ecological conditions, for thousands of years. While saving seed and even exchanging seed with other farmers has been a traditional practice, these practices have become illegal for the plant varieties that are patented or otherwise owned by an entity.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the value chain and is relevant for operations of all sizes that are involved in breeding and selection activities. Processing and marketing operations can also have an impact on the conservation and promotion of on-farm seed saving and breeding activities through their purchasing policies, thus this indicator is also relevant to them.		
3. Unit of Measurement or Metric		
For plants: This indicator serves to check whether the operation saves seeds to conserve traditional varieties. For animals: This indicator serves to check whether the operation engages with breeding work to conserve locally adapted breeds.		
4. How to Measure		
1. Identify those parts of your operations where animal and plant breeding are done, or where related activities of others are influenced. 2. Find out if your operation has been practicing seed-saving during the analyzed time-frame. 3. Find out if your operation has been engaged with the selection of breeding stock with locally adapted or rare animal breeds.		
5. Rating		
Best (= Dark Green) score is given if • Most of the seeds of those species and varieties where this is feasible are saved from year to year; and/or • You are engaged with the breeding of at least one locally adapted breed of animals in your operation (if feasible – in some regions no locally adapted breeds are available). <i>For processing/marketing operations:</i> you encourage your input providers to save seeds and keep rare/traditional breeds and promote such practices in your communication with all stakeholders.		

Unacceptable (= **Red**) score is given if

You do not save any seeds, nor use open pollinating varieties, although this would be feasible.

You do not keep any locally adapted and/or rare breeds, although this would be feasible.

For processing/marketing operations: you discourage your input providers (verbally or simply by avoiding making contracts with such producers) to save seeds, use open-pollinating varieties and/or keep rare/traditional breeds, although you could do so.

6. Limitations of the indicator

As breeding as well as the proper storage of seeds are not always and everywhere possible, its feasibility should first be assessed. Local stakeholders, such as plant breeders and farmers, should be involved in this assessment.

7. Sources of information

- [FAO Biodiversity website: www.fao.org/biodiversity/en](http://www.fao.org/biodiversity/en)
- [FAO – Biodiversity to nurture people: www.fao.org/docrep/004/V1430E/V1430E04.htm](http://www.fao.org/docrep/004/V1430E/V1430E04.htm)
- [International Treaty on Plant Genetic Resources for Food and Agriculture: www.planttreaty.org](http://www.planttreaty.org)
- [FAO – Seed diversity of crops and varieties: ftp://ftp.fao.org/docrep/fao/010/ai502e/ai502e02.pdf](ftp://ftp.fao.org/docrep/fao/010/ai502e/ai502e02.pdf)
- [FAO - Promoting the Growth and Development of Smallholder Seed Enterprises for Food Security Crops: www.fao.org/docrep/013/i1839e/i1839e00.pdf](http://www.fao.org/docrep/013/i1839e/i1839e00.pdf)
- [FAO DAD-IS – Domestic Animal Diversity Information System: http://dad.fao.org/](http://dad.fao.org/)
- [Global Plan for Action for Animal Genetic Resources: http://www.fao.org/docrep/010/a1404e/a1404e00.htm](http://www.fao.org/docrep/010/a1404e/a1404e00.htm)

Core Indicator Name		
Material consumption practices (E 5.1.1)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Material Use (E 5.1)
1. Description		
The replacement of virgin non-renewable by recycled and renewable materials and the reduction of the material intensity of production (increased eco-efficiency) are two central pillars of a green economy. This indicator is used to assess the extent to which activities and practices that foster the strengthening of these two pillars have been implemented in the operations of the analyzed enterprise.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to enterprises at all levels of the value chain and of all sizes whose operations depend on supply with materials of any kind.		
3. Unit of Measurement or Metric		
The indicators focuses on compiling all practices and activities that have been implemented that effectively (i) reduced the material intensity of your operations and (ii) replaced virgin non-renewable materials (including packaging, mulching, nets, greenhouse plastic; excluding fuel) by recycled, reused and renewable ones in your operation and replaced synthetic inputs by natural inputs.		
4. How to Measure		
- The menu of practises that potentially reduce material intensity and replace non-renewable virgin materials are: - Consequent prioritization: minimize material input > minimize wastage > recycle wastes and use internal material sources > acquire recycled materials > acquire non-recycled material. - Replacement of materials with non-renewable, insecure supply by renewable options. - Replacement of material-intensive processes and machinery by more efficient alternatives. - Nutrient management: establishment of farm- and parcel-level nitrogen and phosphorus balances as a basis for fertilization planning; targeted nutrient application using appropriate technologies, taking into account soil and weather conditions and crop development. - Identify the type, extent and effectiveness of all practices and activities implemented in your enterprise that contributed to a reduction of material intensity per unit produce and a reduction of the share of non-renewable virgin materials. - Compare the list of feasible with the list of implemented practices and rate the share of practices that have been put into practice.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): All feasible practices to reduce the consumption of non-renewable, virgin materials have already been implemented. Unacceptable practices (automatically lead to a “Red” SAFA score): Less than 20% of the feasible practices have resp. less than 20% of the company’s non-renewable		

material-saving potential has been realized.
6. Limitations of the indicator
Compiling the list of available practices for (i) reducing material intensity and (ii) replacing non-renewable, virgin materials by renewable, recycled or reused alternatives for the analyzed company requires a rating of the feasibility and meaningfulness of numerous measures. We recommend getting eco-efficiency experts involved into this process, as compiling the list requires ample experience and a good overview of available technologies and materials. The added benefit of having such a list is that it can be used as guidance to future eco-efficiency activities.
7. Sources of information
• United Nations. Clean Production Programmes. www.cleanproduction.org/Steps.Process.UN.php • United Nations Environment Programme (UNEP). Green Economy Report. www.unep.org/greeneconomy/GreenEconomyReport/tabid/29846/Default.aspx • United Nations Conference on Trade and Development (UNCTAD). A manual for the preparers and users of eco-efficiency indicators. http://unctad.org/en/Docs/iteipc20037_en.pdf • UN Collaborating Centre on Sustainable Consumption and Production (CSCP). www.scp-centre.org/ • Wuppertal Institute for Environment, Climate and Energy. http://wupperinst.org/en/home/ • European Environment Agency. Waste and material resources. www.eea.europa.eu/themes/waste

Core Indicator Name		
Nutrient balances (E 5.1.2)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Material Use (E 5.1)
1. Description		
To optimize the efficiency of nutrient use and prevent unproductive nutrient losses that pollute the environment, nutrient surpluses and deficiencies should be prevented at the enterprise and parcel / site levels. Therefore, operations in primary production should monitor and outbalance their imports and exports of nutrients.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all enterprises from and to whose operations major amounts of nutrients (in the form of fertilizers, feed, manure, or biomass of any form) are imported and exported. This in particular includes agricultural, forestry and aquaculture operations.		
3. Unit of Measurement or Metric		
This indicator measures the nutrient balance of your operation (supply vs demand, or imports vs exports at farm or parcel level) for nitrogen and phosphorus . At least, either a supply-demand balance (as common in several European countries) or an import-export balance ("farmgate balance") should be calculated. Calculating parcel-level balances will enhance the usefulness of data; such calculations can serve as a basis to fertilization planning.		
4. How to Measure		
1. Determine and quantify all types of crops (be area and yield) and animals (by heads or places and performance) in your operation. 2. Quantify all imports and exports of nutrient-containing materials, such as fertilizers, feed and agricultural produce. 3. Using an established method and recognized standard values, calculate the nitrogen and phosphorus supply and demand of your operation. 4. Correct the nitrogen balance for volatile and, if possible, for liquid losses (leaching). 5. Rate the nitrogen and the phosphorus balance of your operation by comparing effective supply with demand.		
5. Rating		
"Dark Green" SAFA score is reached if (all conditions must be fulfilled): The nitrogen and phosphorus balances of your operation do not deviate by more than 10% from zero, i.e. supply and demand resp. imports and exports are in balance. Unacceptable practices (automatically lead to a "Red" SAFA score): Major imbalances of nitrogen and / or phosphorus flows prevail over a prolonged period and as a consequence, crop yields are reduced (nutrient deficiency) or neighboring terrestrial and aquatic habitats suffer damage from eutrophication.		
6. Limitations of the indicator		
Note that this indicator focuses on nitrogen and phosphorus, as these are the elements that most often either lack (and thus limiting yields) or cause environmental problems (most prominently eutrophication) in primary production. You are encouraged to check for further elements that may be		

relevant in your specific situation, and to calculate balances for these as well.

Nutrient demand and supply have to be calculated based on standard crop demand and livestock excretion values, as well as standard nutrient contents of organic and mineral fertilizers. As most of these vary in practice, the calculated balance can only be an approximation of reality, with error margins of 10% or even more being the rule. A further reason for deviations between calculation and reality is the uncertainty of volatile and liquid nitrogen losses.

7. Sources of information

- FAO. Assessment of Soil Nutrient Balance.
www.fao.org/docrep/006/y5066e/y5066e00.htm#Contents
- OECD and Eurostat. Gross Phosphorus Balances. Handbook.
www.oecd.org/greengrowth/sustainable-agriculture/40820243.pdf
- Dalgaard et al. (2012). Farm nitrogen balances in six European landscapes as an indicator for nitrogen losses and basis for improved management.
www.biogeosciences.net/9/5303/2012/bg-9-5303-2012.pdf
- ADAS (UK). Nutrient Management Software Tools. www.planet4farmers.co.uk

Core Indicator Name		
Renewable and recycled materials (E 5.1.3)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Material Use (E 5.1)
1. Description		
Various materials that are of vital importance to the functioning of agriculture-based value chains stem from non-renewable sources – for example metals, phosphorus fertilizers, fossil fuels. As many of these sources have to be considered as finite, reliance on them should be gradually reduced by reverting to renewable alternatives and recycled non-renewables. This indicator focuses on the degree of independence of the analyzed enterprise from virgin non-renewable materials.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to enterprises at all levels of the value chain and of all sizes whose operations depend on supply with materials of any kind.		
3. Unit of Measurement or Metric		
This indicator measures the share of total material use stemming from off-operation virgin sources.		
4. How to Measure		
1. Determine and quantify all types of materials used in your operation. 2. For all types of materials, determine the sources from which they are procured – renewable, recycled non-renewable or virgin non-renewable. 3. Calculate and rate the share of total material use that is procured from renewable or recycled sources. Differential weighting may be applied based on e.g. the remaining global reserves of a material, or on its importance for the continuation of operations.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): The operation is completely independent from virgin non-renewable materials, and all renewable and recycled materials are procured from sustainable sources. Unacceptable practices (automatically lead to a “Red” SAFA score): Less than 20% of material inputs are procured from renewable and recycled sources, although it would be technically and economically feasible to achieve higher shares.		
6. Limitations of the indicator		
Classifying a particular material as renewable or non-renewable may prove challenging, e.g. in the case of mixtures whose components and their origins are not all known. A further complication may result from the fact that some non-renewable materials can hardly or not at all be recycled at economically feasible cost for technological reasons (e.g. phosphorus contained in sewage sludge). For renewable materials, it should be checked wherever possible, whether they originate from sustainably used sources. Otherwise, there can be a risk that soil, vegetation and water resources are overused in order to supply the operation with e.g. wood or liquid biofuels.		
7. Sources of information		
• UN Clean Production Programmes. www.cleanproduction.org/Steps.Process.UN.php • United Nations Environment Programme (UNEP). Metal recycling report. www.unep.org/resourcepanel/metals_recycling/		

Core Indicator Name		
Intensity of material use (E 5.1.4)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Material Use (E 5.1)
1. Description		
In addition to the replacement of virgin non-renewable by recycled and renewable materials, the material intensity of production – as a measure of eco-efficiency – should be reduced to or kept at a low level. This indicator pertains to the amount of materials used per unit of produce in the analyzed company's operations.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to enterprises at all levels of the value chain and of all sizes whose operations depend on supply with materials of any kind.		
3. Unit of Measurement or Metric		
The indicator measures the change in the quantity of materials used per unit produce in your operation (excluding fuel, machinery and food; including packaging and agrochemicals) during the past 5 years?		
4. How to Measure		
1. For the past five years, determine and quantify all types of materials used in your operation. Decide whether and how to include upstream material use and efficiency into the calculation. If there are different types of material inputs, normalize output to a common unit, e.g. weight or volume. 2. For the same period, quantify the total amount of produce from your operation. If there are different types of produce, normalize output to a common unit, e.g. weight or volume. 3. Calculate the material intensity of your operation by dividing material input by amount of produce and depict the trend of this value over the past five years. Take care to correct for major changes in the structure of production, e.g. due to the introduction of new products.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): The material intensity of production per unit of produce has substantially decreased over the past five years. The percentage threshold for a “substantial” reduction of material intensity should be set and justified by internal and external experts, based on the level of material intensity (resp. eco-efficiency) already achieved by the company at the beginning of the analyzed period. Unacceptable practices (automatically lead to a “Red” SAFA score): The material intensity of production per unit of produce has substantially increased over the past five years.		
6. Limitations of the indicator		
Much material use and extraction occurs upstream of the operations in agriculture-based value chains. Hence this indicator can only depict part of the whole picture of material flows. The indicator does not differentiate between types of materials, although it makes a difference from an environmental perspective whether these are e.g. radioactive materials or just sand. Where the necessary data are available, SAFA users are encouraged to enhance this calculation by applying differential weighting. Life Cycle Assessment (LCA) and Material Input Per Service unit (MIPS) studies		

may provide orientation in this regard.

7. Sources of information

- United Nations. Clean Production Programmes. www.cleanproduction.org/Steps.Process.UN.php
- United Nations Environment Programme (UNEP). Green Economy Report. www.unep.org/greeneconomy/GreenEconomyReport/tabid/29846/Default.aspx
- United Nations Conference on Trade and Development (UNCTAD). A manual for the preparers and users of eco-efficiency indicators. http://unctad.org/en/Docs/iteipc20037_en.pdf
- UN Collaborating Centre on Sustainable Consumption and Production (CSCP). www.scp-centre.org/
- Wuppertal Institute for Environment, Climate and Energy. <http://wupperinst.org/en/home/>
- European Environment Agency. Waste and material resources. www.eea.europa.eu/themes/waste

Core Indicator Name		
Renewable energy use target (E 5.2.1)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Energy Use (E 5.2)
1. Description		
Future generations will have less non-renewable energy sources at disposal than the current generation. To fulfill their demands, they will need to increasingly rely on renewable (and sustainable) sources of energy. Given the negative effects of the burning of fossil fuels on global climate, dependence on non-renewable energy sources should be reduced as quickly as feasible. This indicator serves to assess whether the analyzed enterprise has a formal and written plan with binding targets for replacing non-renewable sources of energy in its operations.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to enterprises at all levels of the supply chain and of all sizes whose operations depend on external energy inputs of any kind.		
3. Unit of Measurement or Metric		
The indicator asks whether the enterprise set a target for the share of renewable and sustainable energies in the total direct energy use?		
4. How to Measure		
Determine whether the enterprise has a written plan – available to all stakeholders - that includes a measurable and binding target for the replacement of non-renewable sources of energy by renewable and sustainable ones, with exact steps that outline how these targets can be achieved within the expected time-frame.		
5. Rating		
YES (= Dark Green) answer is given if: - the enterprise has a written plan, available to all stakeholders, with a binding renewable energy target; AND - steps have been implemented towards achieving the target. PARTIAL (= Yellow) answer is given either if: - the enterprise has a plan with a set renewable energy target, but no steps have been made towards achieving the target OR - the enterprise has a renewable energy target and has implemented steps for achieving it, however this has not been put into writing OR - the enterprise has a plan with a set renewable energy target and steps have been made towards achieving the target, however the plan is not available to all stakeholders. NO (= Red) answer is given if none of the above requirements have been met yet.		
6. Limitations of the indicator		
The implementation of a renewable energy plan may be hindered by the availability and price of renewable sources of energy, particularly if they are economically less competitive than non-renewable energy sources. Measures to reduce total energy use and enhance energy efficiency should thus be taken as well (see the indicator Energy-saving practices).		

7. Sources of information

- International Energy Agency (IEA). www.iea.org
- World Energy Council. www.worldenergy.org
- United Nations Development Programme (UNDP). Environment and Energy. www.undp.org/energy
- Energy knowledge network of the United Nations' inter-agency mechanism on energy: www.un-energy.org
- Global Bio-Energy Partnership (GBEP). www.globalbioenergy.org
- PLANETE (INRA, France). <http://www.solagro.org/>
- Fieldprint calculator (Field to Market, USA). www.fieldtomarket.org/fieldprint-calculator/info

Core Indicator Name		
Energy-saving practices (E 5.2.2)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Energy Use (E 5.2)
1. Description		
To achieve a sustainable energy use in agriculture-based value chains, energy use will need to be reduced, preferably by enhancing energy efficiency, and the energy system needs to be reverted to renewable and sustainable energy sources. This indicator serves to check for practices that reduce the energy needs of the analyzed enterprise, both in absolute terms and per unit of produce. Note that the outsourcing of energy-intensive processes is not considered as an improvement of sustainability here.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to enterprises at all levels of the supply chain and of all sizes whose operations depend on external energy inputs of any kind.		
3. Unit of Measurement or Metric		
The indicator focuses on all practices and activities that have been implemented by the enterprise to effectively reduce the energy requirements?		
4. How to Measure		
- Together with internal and – if possible – external experts, identify practices and activities with a potential to save energy and enhance energy efficiency in your operations. Alternatively, a list of such practices may be compiled from existing sources, e.g. local energy consultancies or international organizations. Examples of such practices include: - Mainstreaming principles of sustainable energy use into strategies and operations and monitoring energy use and the structure of energy supply, if possible at process level. - Informing staff and stakeholders about ways to save energy and encouraging suggestions from staff. - Replacing energy-intensive processes by less intensive alternatives. Examples: no more air freight, shorter transport distances, reduced tillage, better isolation of buildings, more energy-efficient machinery and procedures. - Using modern energy services that are energy-efficient and do not harm neither human health nor the environment. - Investing into better insulation of buildings, reductions of unnecessary energy use (e.g. lighting of rooms when no one is present, overheating and overcooling), optimising processes etc. - Identify the type, extent and effectiveness of all practices and activities implemented in your enterprise that contributed to a reduction of energy use in absolute terms AND an enhancement of energy efficiency per unit produce in relative terms. - Compare the list of feasible (available and accessible) with the list of implemented practices and rate the share of practices that have been put into practice.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): All feasible energy-saving practices have already been implemented and the company thus uses its		

full energy-saving potential.

Unacceptable practices (automatically lead to a “Red” SAFA score):

Less than 20% of the feasible practices have resp. less than 20% of the company’s energy-saving potential has been realized.

6. Limitations of the indicator

Compiling the list of available energy-saving practices for the analyzed enterprise requires a rating of the feasibility and meaningfulness of numerous measures. We recommend getting energy experts involved into this process, as compiling the list requires ample experience in the field of energy management. The added benefit of having such a list is that it can be used as guidance to future energy-saving activities.

7. Sources of information

- Global Bio-Energy Partnership (GBEP) Sustainability Indicators for Bioenergy:
- http://www.globalbioenergy.org/fileadmin/user_upload/gbep/docs/Indicators/The_GBEP_Sustainability_Indicators_for_Bioenergy_FINAL.pdf
- PLANETE (INRA, France). http://www.solagro.org/site/im_user/286014planeteeoct02.pdf
- Fieldprint calculator (Field to Market, USA). www.fieldtomarket.org/fieldprint-calculator/info

Core Indicator Name		
Energy consumption (E 5.2.3)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Energy Use (E 5.2)
1. Description		
While a shift from non-renewable to renewable and sustainable source of energy will enhance the sustainability of agriculture-based value chains, enhanced energy efficiency and reduced energy use are further necessary pillars on the way to a sustainable energy system. This indicator therefore pertains to the reduction of energy use by the analyzed enterprise, preferably through enhanced energy efficiency (but not through outsourcing to other companies).		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to enterprises at all levels of the supply chain and of all sizes whose operations depend on external energy inputs of any kind. Energy calculations normally will take into account neither human and animal work nor photosynthesis.		
3. Unit of Measurement or Metric		
The indicator measures how has your direct energy consumption per unit of produce changed during the past five years . Alternatively: how has direct energy consumption per unit of produce or area changed during the past five years?		
4. How to Measure		
1. For the past five years, determine the types and quantities used in one year of all energy carriers (in litres, m³ or kWh). Attribute all substantial changes in energy use patterns to the practices causing them – enhanced energy efficiency, outsourcing of processes to other companies, etc.. 2. Calculate energy imports and exports: correct e.g. for energy use in contractual work (energy used by others, but within the analysed production site; energy used by the analysed entity, but outside the production site). 3. Multiply the net quantity used of each energy carrier with its energy density (in MJ per unit). 4. Calculate net energy per unit of produce for the past five years and depict the trend over this period. 5. The minimum boundaries of the assessment is the direct energy consumption on the enterprise's sites. If the enterprise can quantify indirect energy use (e.g. transport of all inputs and produce, feed production, fertilizer production, fuel for land-use change for input production, etc.) those should be included as well. If indirect energy use cannot be quantified, the main hotspot areas shall be identified and the rating should take these potential high energy-consumption areas into account.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): Energy use of the enterprise has constantly and substantially decreased over the past five years per unit of produce. The percentage threshold for a “substantial” reduction of energy use should be set and justified by internal and external experts, based on the level of energy efficiency already achieved by the company at the beginning of the analyzed period.		

Unacceptable practices (automatically lead to a “Red” SAFA score):

Energy use per unit of produce of the enterprise has increased over the past five years.

6. Limitations of the indicator

Prior to calculating this indicator, a decision on the scope of the calculation will need to be taken; for example, whether primary or final energy will be considered. If primary energy is to be calculated, this will require data on conversion efficiencies.

A major challenge in calculating and rating a score for this indicator will arguably concern the attribution of changes of energy use patterns to their causes, and the evaluation of these causes. However, this step is necessary to prevent the mere outsourcing of energy-intensive processes from being rated as enhancing sustainability.

7. Sources of information

- International Energy Agency (IEA). www.iea.org
- World Energy Council. www.worldenergy.org
- United Nations Development Programme (UNDP). Environment and Energy. www.undp.org/energy
- Energy knowledge network of the United Nations’ inter-agency mechanism on energy: www.un-energy.org
- Global Bio-Energy Partnership (GBEP). www.globalbioenergy.org
- PLANETE (INRA, France). www.solagro.org/site/im_user/286014planeteooc02.pdf
- Fieldprint calculator (Field to Market, USA). www.fieldtomarket.org/fieldprint-calculator/info

Core Indicator Name		
Renewable energies (E 5.2.4)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Energy Use (E 5.2)
1. Description		
Future generations will have less non-renewable energy sources at disposal than the current generation. To fulfill their demands, they will need to increasingly rely on renewable (and sustainable) sources of energy. Given the negative effects of the burning of fossil fuels on global climate, dependence on non-renewable energy sources should be reduced as quickly as feasible.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to enterprises at all levels of the supply chain and of all sizes whose operations depend on external energy inputs of any kind. Energy calculations normally will take into account neither human and animal work nor photosynthesis.		
3. Unit of Measurement or Metric		
The indicator measures the share of your total energy use stemming from renewable and sustainable (i.e. not based on practices that degrade ecosystems or cause social disruptions) sources .		
4. How to Measure		
1. Determine the types and quantities used in one year of all energy carriers (in litres, m³ or kWh). 2. Identify the origin of each of the used energy carriers. Do they originate from renewable <u>and</u> sustainable sources? The following energy carriers cannot be considered sustainable: coal/fuel oil, traditional bioenergy (charcoal), conventional fossil fuels (e.g. diesel, gasoline, LPG) and gas from fracking. 3. Calculate energy imports and exports: correct e.g. for energy use in contractual work (energy used by others, but within the analysed production site; energy used by the analysed entity, but outside the production site). 4. Multiply the net quantity used of each energy carrier with its energy density (in MJ per unit). 5. Calculate the share of renewable and sustainable energy carriers over total net energy use.		
5. Rating		
“Dark Green” SAFA score is reached if : The enterprise is completely independent from non-renewable and non-sustainable sources resp. carriers of energy. Unacceptable practices (automatically lead to a “Red” SAFA score): Less than 20% of net total energy supply is procured from renewable and sustainable sources, although it would be technically and economically feasible to achieve higher shares.		
6. Limitations of the indicator		
Prior to calculating this indicator, a decision on the scope of the calculation will need to be taken; for example, whether primary or final energy will be considered. If primary energy is to be calculated, this will require data on conversion efficiencies. Today, not all operations have access to renewable and sustainable types of energy at an affordable price. As renewable energy technologies progress, the threshold for a “red” rating should become stricter and not take into account any more the technical feasibility of renewable energy use.		

Checking whether an energy source is renewable will not always suffice. Where the provision of renewable energies comes at the cost of a degradation of the environment, the energy system will not ultimately meet sustainability goals.

7. Sources of information

- International Energy Agency (IEA). www.iea.org
- World Energy Council. www.worldenergy.org
- United Nations Development Programme (UNDP). Environment and Energy. www.undp.org/energy
- Energy knowledge network of the United Nations' inter-agency mechanism on energy: www.un-energy.org
- Global Bio-Energy Partnership (GBEP). www.globalbioenergy.org
- Agricultural energy assessment:
- PLANETE (INRA, France). www.solagro.org/site/im_user/286014planeteeoct02.pdf
- Fieldprint calculator (Field to Market, USA). www.fieldtomarket.org/fieldprint-calculator/info

Core Indicator Name		
Waste reduction target (E 5.3.1)		
Dimension Environmental Integrity	Theme Material and energy use (E5)	Sub-theme Waste Reduction and Disposal (E 5.3)
1. Description		
This indicator is used to assess the presence of a written plan that sets measurable and binding targets for the reduction and prevention of waste generation (in particular of hazardous wastes) by the analyzed enterprise. The waste reduction target can be phrased as a percentage, in total absolute amounts, or per unit of produce.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied on all levels of the value chain and is relevant for operations of all sizes that generate waste. Small-scale farms may or may not have a written waste reduction target, thus they can opt to omit this indicator.		
3. Unit of Measurement or Metric		
This indicator asks whether the operation has set a target in reducing the generation of waste, as well as the hazardousness of this waste		
4. How to Measure		
1. Determine if the operations that generate waste, in particular hazardous waste, have been identified. 2. Assess whether the operation has a written and binding plan – public and available to all stakeholders - with exact objectives, targets and timelines for waste reduction. 3. If such a plan exists, check whether the operation has made exact steps into the implementation and fulfillment of the objectives within the expected timeframe.		
5. Rating		
YES (= Dark Green) answer is given if: the operation has a written plan, available to all stakeholders, with binding waste reduction targets; AND steps have been implemented towards achieving the targets. PARTIAL (= Yellow) answer is given either if: • the operation has a plan with set waste reduction targets, but no steps have been made towards achieving the targets OR • the operation has waste reduction targets and has implemented steps for achieving these targets, however this has not been put into writing OR • the operation has a plan with set waste reduction targets, and steps have been made towards achieving these targets, however the plan is not available to all stakeholders. NO (= Red) answer is given if none of the requirements have been met yet.		
6. Limitations of the indicator		

The practicability and sufficiency of the waste reduction plan should be assessed by external experts. This assessment will inevitably include some degree of subjectivity, as the technical and economic feasibility of reduction options can be rated differently.

7. Sources of information

- UNEP. Resource kit on waste management. www.unep.org/tools/default.asp?ct=waste
- UNEP. Harmful substances and hazardous wastes. www.unep.org/hazardoussubstances/
- OECD Working Group on Waste Prevention and Recycling. Guidance manual on environmentally sound management of waste. www.oecd.org/env/waste/39559085.pdf
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. www.basel.int
- Air and Waste Management Association. www.awma.org

Core Indicator Name		
Waste reduction practices (E 5.3.2)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Waste Reduction and Disposal (E 5.3)
1. Description		
The generation of wastes and in particular of hazardous wastes creates disposal problems that can cause social problems (health risks, noxious odors), environmental pollution (leaching from inappropriate disposal, gaseous emissions) and economic damage (cost of disposal and rehabilitation). Therefore, waste generation should be reduced to the minimum in agriculture-based value chains.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the value chain and is relevant for operations of all sizes that generate waste.		
3. Unit of Measurement or Metric		
The indicator focuses on all practices and activities that have been implemented to effectively reduce the quantities and hazardousness of waste from your operations.		
4. How to Measure		
- Together with internal and – if possible – external experts, identify practices and activities with a potential to reduce waste generation, in particular the generation of hazardous wastes. Alternatively, a list of such practices may be compiled from existing sources. As a general principle, apply the “waste hierarchy” by giving preference to the measures at the top of the hierarchy: - Reduce – minimize waste generation, e.g. by “zero waste” strategies and eco-efficient processes. - Reuse – utilize by-products and establish cascading material flows. - Recycle – reprocess wastes for further use. - Energy recovery – generate energy from the remaining waste using a variety of technologies. - Disposal – dispose of remaining waste in a safe and clean manner. - Identify the type, extent and effectiveness of all practices and activities implemented in your enterprise that contributed to waste reduction per unit produce and a reduction of the share of hazardous wastes. - Compare the list of feasible with the list of implemented practices and rate the share of practices that have been put into practice.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): All feasible practices to reduce waste generation have already been implemented; all of your operations are “zero-waste” operations. Unacceptable practices (automatically lead to a “Red” SAFA score): Less than 20% of the feasible practices have been implemented OR less than 20% of the company’s waste reduction potential has been tapped.		
6. Limitations of the indicator		

Compiling the list of available waste reduction practices requires an assessment of the feasibility and meaningfulness of numerous measures. We recommend getting waste management experts involved into this process, as compiling the list requires ample experience and a good overview of available technologies. The added benefit of having such a list is that it can serve as guidance to future waste reduction efforts.

Determining waste quantities may prove difficult where inappropriate disposal practices prevail, such as dumping into the ocean.

7. Sources of information

- United Nations. Clean Production Programmes. www.cleanproduction.org/Steps.Process.UN.php
- UNEP. Resource kit on waste management. www.unep.org/tools/default.asp?ct=waste
- UNEP. Harmful substances and hazardous wastes. www.unep.org/hazardoussubstances/
- OECD Working Group on Waste Prevention and Recycling. Guidance manual on environmentally sound management of waste. www.oecd.org/env/waste/39559085.pdf
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. www.basel.int
- Air and Waste Management Association. www.awma.org
- European Environment Agency. Waste and material resources. www.eea.europa.eu/themes/waste

Core Indicator Name Waste disposal (E 5.3.3)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Waste Reduction and Disposal (E 5.3)
1. Description		
If wastes and in particular of hazardous wastes are not properly disposed of, this can cause social problems (health risks, noxious odors), environmental pollution (leaching from inappropriate disposal, gaseous emissions) and economic damage (cost of disposal and rehabilitation). Therefore, besides waste reduction, safe waste disposal is a foundation of sustainable production in agriculture-based value chains.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the value chain and is relevant for operations of all sizes that generate waste.		
3. Unit of Measurement or Metric		
The indicator asks for the amount of solid waste generated that is not segregated, stored and treated such that it is rendered non-hazardous to humans and environment at the point of release from the enterprise? The scope of this indicator includes biodegradable and recyclable materials, e.g. crop residues, plastics, cardboard, etc. that are composted, re-used or recycled.		
4. How to Measure		
1. Identify all types of wastes, with their respective quantities, that are generated in your operations. 2. For each of these waste categories, describe in detail how they are stored, treated and disposed of. If waste of the same category is treated in different ways, e.g. at different production sites, focus on the worst type of treatment. 3. For each waste category, rate whether the way it is stored, treated and disposed of sufficiently reduces risks to human and environmental health. Whether practices are deemed acceptable or not should be decided together with concerned stakeholders and / or waste management experts.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): The waste storage, treatment and disposal practices of the enterprise pose no threat to the health of humans and ecosystems. Unacceptable practices (automatically lead to a “Red” SAFA score): The waste storage, treatment and disposal practices of the enterprise cause unacceptable or even illegal risks to the health of humans and ecosystems.		
6. Limitations of the indicator		
Determining waste quantities may prove difficult where inappropriate disposal practices prevail, such as dumping into the ocean. A weighting of waste categories by their hazardousness is desirable, however can be complicated to apply as it required comprehensive information on the aquatic eco-toxicity, terrestrial eco-toxicity,		

acute and chronic toxicity to humans and the persistency of substances in the environment, to cite only some parameters.

7. Sources of information

- United Nations. Clean Production Programmes. www.cleanproduction.org/Steps.Process.UN.php
- UNEP. Resource kit on waste management. www.unep.org/tools/default.asp?ct=waste
- UNEP. Harmful substances and hazardous wastes. www.unep.org/hazardoussubstances/
- OECD Working Group on Waste Prevention and Recycling. Guidance manual on environmentally sound management of waste. www.oecd.org/env/waste/39559085.pdf
- The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. www.basel.int
- Air and Waste Management Association. www.awma.org
- European Environment Agency. Waste and material resources. www.eea.europa.eu/themes/waste

Core Indicator Name		
Food loss and waste reduction (E 5.3.4)		
Dimension Environmental Integrity	Theme Materials and Energy (E 5)	Sub-theme Waste Reduction and Disposal (E 5.3)
1. Description		
The subjects of this indicator are food losses that occur during production, postharvest and processing operations, as well as food losses at the consumer level; the latter are termed as “food waste”.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is to be applied at all levels of the value chain and is relevant for operations of all sizes that produce or handle food. As an extension of the usual scope of SAFA, it includes the consumer stage of the value chain insofar as food waste occurring at this stage is induced by practices at previous steps of the chain.		
3. Unit of Measurement or Metric		
The indicator measures the share of food that is lost or wasted in your operations and its share that is reused (charities, feed), recycled or recovered (compost, bioenergy),		
4. How to Measure		
1. Quantify the total amount of food that is produced and handled in your operations. 2. For each food item, quantify or estimate the share that is lost while the food is produced or handled in your operations. This includes losses due to e.g. insufficient crop protection, improper storage and improper handling. If feasible, also estimate the share of food that is wasted at other levels of the value chain as a (at least partial) consequence of your company’s practices. Example: a food processing company only buys certain potato or vegetable varieties because these are easier to process. These varieties are more susceptible to disease and thus losses on the field are higher than with other varieties. 3. For each food item, quantify or estimate the shares of “lost” material that are put to another use, e.g. as a donation to charities, as animal feed or as a source of compost or energy. Subtract these quantities from the “lost” quantities determined before to arrive at those quantities that are completely lost. 4. Aggregate and rate the share of food loss/waste for your whole enterprise.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): Food losses and waste do not exceed an inevitable minimum over the entire sphere of influence of the analyzed enterprise. Where losses cannot be prevented, all concerned food is put into use via other channels (charities, feed, compost, bioenergy). Unacceptable practices (automatically lead to a “Red” SAFA score): Food losses and waste in the sphere of influence of the analyzed enterprise have increased over the past years OR the share of losses and waste is higher than usual in the same sector and region, and the enterprise has taken no action to put these into use via other channels.		

6. Limitations of the indicator

Both food losses and food waste can be very difficult to quantify, as there usually are no “control treatments” where no such losses and wastes occur. Attributing losses and waste to a company is a further challenge, as for example methods of packaging and conservation interact with consumer habits, as do preferences of food companies for certain varieties and the ability of farmers to protect these particular varieties from pests and diseases.

7. Sources of information

- FAO. Sustainability pathways – Food waste footprint. www.fao.org/nr/sustainability/food-loss-and-waste/en/
- FAO. Global food losses and food waste. www.fao.org/docrep/014/mb060e/mb060e00.pdf
- FAO and Messe Düsseldorf: SAVE Food Initiative. www.fao.org/save-food/en/
- FAO. Post-harvest losses: discovering the full story. www.fao.org/docrep/004/AC301E/AC301E00.HTM
- FAO Training Manuals. Prevention of post-harvest food losses. www.fao.org/docrep/x0039e/x0039e00.htm, www.fao.org/docrep/T0073E/T0073E00.htm

Core Indicator Name		
Integrated animal health practices (E 6.1.1)		
Dimension Environmental Integrity	Theme Animal welfare (E 6)	Sub-theme Health and Freedom from Stress (E 6.1)
1. Description		
Animal health is a state of physical, mental and social well-being. For the sake of simplicity, it can also be understood as the absence of illness and injury. This indicator serves to check whether practices and activities have been implemented that support animal health and that reduce the need for veterinary treatments as well as unwanted animal losses.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is relevant to all enterprises that keep and use animals. This includes livestock kept on farms, fish in aquaculture, invertebrates such as lobsters, bees and silkworms, but also laboratory animals, and watchdogs kept to guard factories. The scope of the indicator includes all phases of the animals' life on which the analyzed enterprise has influence, from birth resp. hatching to killing. If all three performance indicators for the sub-theme Health and freedom from stress have been calculated, it will not be necessary to apply this indicator in addition. In situations where one or all of these performance indicators cannot be applied, e.g. due to lack of data, the present practice indicator should be applied. In addition, the practice indicator Humane animal handling practices should be used in such instances.		
3. Unit of Measurement or Metric		
This indicator focuses on all activities and practices that have been implemented to effectively promote the health of animals, while reducing the use of veterinary drugs and preventing animal losses due to disease and injuries.		
4. How to Measure		
1. Determine the total number of animals kept within the enterprise's sphere of influence. Ideally, animals are segregated into categories e.g. according to species and age. 2. For each animal category and phase of life, list all relevant practices and activities that were implemented to promote animal health in an integrated manner. We recommend involving external experts and stakeholders in this process. Examples of beneficial practices include: 3. Practices facilitating species-appropriate behavior and practices that reduce levels of stress (see the practices listed in the indicator Humane animal handling). 4. Regular and professional monitoring of animal health, including written records. 5. Animal breeding and selection based on criteria that include resistance to and tolerance of diseases, robustness, adaptation to climate and topography, longevity, fertility etc. 6. Preventive measures, such as quarantine, separation of groups, recommended vaccinations and precautions that prevent the spreading of diseases (no access to stables, overalls and overshoes etc.). 7. Calculate the share of the concerned animal population that benefits from practices which promote animal health in an integrated manner. For this calculation, a decision on weighting will be needed – by heads, by categories, by livestock units etc..		

5. Rating

“**Dark Green**” SAFA score is reached if (all conditions must be fulfilled):

All animals in the company’s sphere of influence benefit from integrated health-promoting measures.

Unacceptable practices (automatically lead to a “**Red**” SAFA score):

Although substantial health problems prevail, less than 20% of the concerned animals benefit from measures to promote animal health in an integrated manner.

6. Limitations of the indicator

There is no direct metric of animal health in a comprehensive sense, as the physical and mental health of an individual creature is a complex phenomenon. Partly for this reason, it can be difficult to determine the effects of health-promoting measures with certainty. For some measures, including some vaccinations, there is disagreement as to whether they are necessary.

7. Sources of information

- Codex Alimentarius list of veterinary drugs.
www.codexalimentarius.net/vetdrugs/data/vetdrugs/index.html
- FAO. Agriculture and Consumer Protection Department: Livestock and Animal health.
www.fao.org/ag/againfo/themes/en/animal_health.html
- FAO. Emergency Prevention System for Transboundary Animal and Plant Pests and Diseases (EMPRES). www.fao.org/ag/againfo/programmes/en/empres/home.asp
- FAO. Global Animal Disease Information System. <http://empres-i.fao.org/eipws3g/#h=0>
- Welfare Quality® Assessment Protocols. www.welfarequality.net/everyone/45630/9/0/22
- World Organisation for Animal Health. www.oie.int/en

Core Indicator Name		
Humane animal handling practices (E 6.1.2)		
Dimension Environmental Integrity	Theme Animal welfare (E 6)	Sub-theme Health and Freedom from Stress (E 6.1)
1. Description		
This indicator serves to check whether practices are in place which ensure that animals can enjoy the “five freedoms”, namely freedom from hunger and thirst, from discomfort, from pain, injury and disease and from fear and distress, and freedom to express normal behavior.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is relevant to all enterprises that keep and use animals. This includes livestock kept on farms, fish in aquaculture, invertebrates such as lobsters, bees and silkworms, but also laboratory animals, and watchdogs kept to guard factories. The scope of the indicator includes all phases of the animals’ life on which the analyzed enterprise has influence, from birth resp. hatching to slaughter/death.		
3. Unit of Measurement or Metric		
The indicator focuses on all practices and activities that have been implemented to effectively reduce the suffering and risk of injury of animals during all phases of their life, including transport and killing.		
4. How to Measure		
- Determine the total number of animals kept within the enterprise’s sphere of influence. Ideally, animals are segregated into categories e.g. according to species and age, because their needs will be different. - For each animal category and phase of life: (i) determine whether they suffer from stress, and (ii) list the practices and activities that were implemented to reduce the level of stress of concerned animals. We recommend involving external experts and stakeholders in this process. Examples of best practices include: • More access to pasture for livestock; • Improved weather protection for livestock on pasture • Improved climate in stables (fresh air, enough light, cleanliness etc.); • Sufficient contact with conspecifics, stable size of animal groups; • Environmental enrichment for animals; - Calculate the share of the concerned animal population that benefits from practices which reduce their level of stress. For this calculation, a decision on weighting will be needed – by heads, by categories, by livestock units etc.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): All animals in the enterprise’s sphere of influence that are affected by stress can benefit from measures taken to reduce the level of stress.		

Unacceptable practices (automatically lead to a “Red” SAFA score):

- Inhumane and illegal treatment of animals, such as butchering with a dull knife or unnecessarily long transport without sufficient space and water.
- Practices to reduce the level of stress are implemented for less than 20% of the concerned animals.

6. Limitations of the indicator

There is no direct metric of animal health in a comprehensive sense, as the physical and mental health of an individual creature is a complex phenomenon. The indicator takes the absence of diseases, injuries and high mortality rates as a proxy for animal health. It is, however, possible that healthy animals were treated prophylactically.

7. Sources of information

- Welfare Quality® Assessment Protocols. www.welfarequality.net/everyone/45630/9/0/22
- Farm Animal Welfare Committee. The five freedoms. www.fawc.org.uk/freedoms.htm
- Agroscope. Centre for Proper Housing. www.agroscope.admin.ch/zentrum-tiergerechte-haltung/index.html?lang=en

Core Indicator Name		
Species-appropriate animal husbandry (E 6.1.3)		
Dimension Environmental Integrity	Theme Animal welfare (E 6)	Sub-theme Health and Freedom from Stress (E 6.1)
1. Description		
The indicator focuses on the fifth of the “five freedoms”, namely the freedom to express normal behavior. This freedom mainly pertains to ethological aspects. The other four freedoms are of a physiological nature and are captured by the indicator Freedom from stress.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is relevant to all enterprises that keep and use animals. This includes livestock kept on farms, fish in aquaculture, invertebrates such as lobsters, bees and silkworms, but also laboratory animals, and watchdogs kept to guard factories. The scope of the indicator includes all phases of the animals’ life on which the analyzed enterprise has influence, from birth resp. hatching to slaughter/death.		
3. Unit of Measurement or Metric		
The indicator measures the share of animals that have the possibility to behave according to their specific needs . This can e.g. include permanent access to open air, enough space to roam around, appropriate feed to meet nutritional and behavioural needs, and at least visual contact with conspecifics (of the same species).		
4. How to Measure		
1. Determine the total number of animals kept within the enterprise’s sphere of influence. Ideally, animals are segregated into categories e.g. according to species and age, because their needs will be different. 2. For each animal category and phase of life, carefully investigate possibilities for species- and age-specific behavior. This will ideally include a sufficiently long observation of animals that follows an established protocol. 3. For each animal category and phase of life, rate the level of species-appropriateness using an established protocol, such as the Welfare Quality protocols. We recommend involving external experts and stakeholders in this process. 4. Calculate the share of the total animal population that is free to exercise their natural behavior. For this calculation, a decision on weighting will be needed – by heads, by categories, by livestock units etc.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): All animals in the enterprise’s sphere of influence have the possibility to behave according to their specific needs Unacceptable practices (automatically lead to a “Red” SAFA score): 20% (or less) of animals in the enterprise's sphere of influence do not have the possibility to behave according to their specific needs.		

6. Limitations of the indicator

Our knowledge about the needs, perceptions and sentiments of animals is incomplete. We therefore need to rely on proxies and sometimes on assumptions when it comes to assessing the level of stress from which animals may suffer.

A professional assessment of species-appropriateness has to rely on observations of animal behavior. Since such observations can be very time-consuming, one may have to opt for shorter observation periods and indirect metrics (e.g. body condition, lesions, etc.).

An enterprise's sphere of influence can sometimes be hard to delineate. For example, pig fattening operations often buy piglets from breeders. While it is the breeder who castrates boars and docks the pigs' tail, it may be considered a joint responsibility of breeder and fatterer to develop production systems that only require a minimum of such zoo-technical alterations.

7. Sources of information

- Welfare Quality® Assessment Protocols. www.welfarequality.net/everyone/45630/9/0/22
- Federal Veterinary Office of Switzerland. Animal Welfare. www.bvet.admin.ch/themen/tierschutz/index.html?lang=en
- Farm Animal Welfare Committee. The five freedoms. www.fawc.org.uk/freedoms.htm
- Agroscope. Centre for Proper Housing. www.agroscope.admin.ch/zentrum-tiergerechte-haltung/index.html?lang=en
- World Organisation for Animal Health: standards on transport and killing of animals: www.oie.int/en/animal-welfare/animal-welfare-key-themes/

Core Indicator Name		
Freedom from stress (E 6.1.4)		
Dimension Environmental Integrity	Theme Animal welfare (E 6)	Sub-theme Health and Freedom from Stress (E 6.1)
1. Description		
The five freedoms define an ideal state, in which all animals kept by humans are free from hunger and thirst, from discomfort, from pain, injury and disease and from fear and distress, and free to express normal behavior. The indicator focuses on the first four of these freedoms, while the last one is captured by the indicator Species-appropriate husbandry.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is relevant to all enterprises that keep and use animals. This includes livestock kept on farms, fish in aquaculture, invertebrates such as lobsters, bees and silkworms, but also laboratory animals, and watchdogs kept to guard factories. The scope of the indicator includes all phases of the animals' life on which the analyzed enterprise has influence, from birth resp. hatching to killing.		
3. Unit of Measurement or Metric		
The indicator measures the share of animals that have sufficient freedom to move around, live free of pain, discomfort and distress all the time, during all phases of their life, including during transport and slaughter?		
For processing/marketing level enterprises: the indicator measures the share of animals (or animal products) that the enterprise purchases which have had sufficient freedom to move around, live free of pain, discomfort and distress all the time, during all phases of their life, including during transport and slaughter.		
4. How to Measure		
1. Determine the total number of animals kept within the enterprise's sphere of influence. Ideally, animals are segregated into categories e.g. according to species and age, because their needs and their susceptibility to stress are different. 2. For each animal category and phase of life, carefully investigate the way they are kept – feed and water supply; space, aeration, lighting and noise in the stables; zoo-technical alterations etc.. 3. For each animal category and phase of life, rate the level of stress using an established protocol, such as the Welfare Quality protocols. We recommend involving external experts and stakeholders in this process. 4. Calculate the share of the total animal population that does not suffer from any serious (physiologically effective) and prolonged stress. For this calculation, a decision on weighting will be needed – by heads, by categories, by livestock units etc.		
5. Rating		
“Dark Green” SAFA score is reached if (all conditions must be fulfilled): • All animals in the company's sphere of influence live all of their life without experiencing serious and prolonged stress. • Avoidance of routine tail docking, teeth clipping, castration, de-horning and comparable		

practices.

Unacceptable practices (automatically lead to a “Red” SAFA score):

- Inhumane and illegal treatment of animals, such as butchering with a dull knife or unnecessarily long transport without sufficient space and water.
- Use of routine tail docking, teeth clipping, castration, de-horning and comparable practices.

6. Limitations of the indicator

Our knowledge about the needs, perceptions and sentiments of animals is incomplete. We therefore need to rely on proxies and sometimes on assumptions when it comes to assessing the level of stress from which animals may suffer.

An enterprise’s sphere of influence can sometimes be hard to delineate. For example, pig fattening operations often buy piglets from breeders. While it is the breeder who castrates boars and docks the pigs’ tail, it may be considered a joint responsibility of breeder and fattener to develop production systems that only require a minimum of such zoo-technical alterations.

7. Sources of information

- Welfare Quality® Assessment Protocols. www.welfarequality.net/everyone/45630/9/0/22
- Federal Veterinary Office of Switzerland. Animal Welfare. www.bvet.admin.ch/themen/tierschutz/index.html?lang=en
- Farm Animal Welfare Committee. The five freedoms. www.fawc.org.uk/freedoms.htm

Core Indicator Name Animal health (E 6.1.5)		
Dimension Environmental Integrity	Theme Animal welfare (E 6)	Sub-theme Health and Freedom from Stress (E 6.1)
1. Description		
Animal health is a state of physical, mental and social well-being. For the sake of simplicity, it can also be understood as the absence of illness and injury.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator has to be applied on the primary production level whenever animals are kept on or by the operations. Marine fish and wild harvest/capture of animals are out of the scope of this indicator. This indicator is relevant for operations of all sizes.		
3. Unit of Measurement or Metric		
This indicator measures the share of animals that are healthy, and have not required any medical treatment against illness or disease in the analyzed enterprise's operations during the analyzed time-frame. This includes aquaculture fish, crustaceans, bees, silkworms, livestock and others. All phases of animal life, from birth to death, are relevant.		
4. How to Measure		
1. Calculate the shares of ill and injured, treated and dead animals per animal type. Rate these shares by comparison with benchmark values. The benchmark values should be adapted to the type of animal and the geographical region. 2. Decide on whether and how to aggregate and to weight animal types, e.g. by calculating livestock units. If more than one batch of an animal type is reared in one year (e.g. in pig fattening), decide whether to count animal heads or places. Decide on whether and how to weight animal diseases, injuries and death. 3. For additional guidance on calculating the health of animals, please refer to the references listed in the "Sources of Information" section below.		
5. Rating		
"Dark Green" SAFA score is reached if (all conditions must be fulfilled): • there was no dead animals due to inhumane treatments; • preventive measures are preferred and no synthetic growth promoters (including hormones) were used; • injury and disease rate was minimum (lower than benchmark values if available, or lower than during last SAFA assessment) • regular check-up (if feasible) by professional animal healthcare Unacceptable practices (automatically lead to a "Red" SAFA score): Use of forbidden veterinary products and synthetic growth promoters and/or inhumane treatment (including hormones).		
6. Limitations of the indicator		

There is no direct metric of animal health in a comprehensive sense, as the physical and mental health of an individual creature is a complex phenomenon. The indicator takes the absence of diseases, injuries and high mortality rates as a proxy for animal health. It is, however, possible that healthy animals were treated prophylactically.

7. Sources of information

- Codex Alimentarius list of veterinary drugs.
www.codexalimentarius.net/vetdrugs/data/vetdrugs/index.html
- FAO – Agriculture and Consumer Protection Department: Livestock and Animal health.
www.fao.org/ag/againfo/themes/en/animal_health.html
- Welfare Quality® Assessment Protocols. www.welfarequality.net/everyone/45630/9/0/22
- World Organisation for Animal Health. www.oie.int/en

SAFA ECONOMIC CORE INDICATORS – OVERVIEW AND FULL EXPLANATIONS

Dimension C: ECONOMIC RESILIENCE		
Themes	Sub-themes	Core Indicators
C1 Investment	C 1.1 Internal Investment	C 1.1.1 Internal investment
	C 1.2 Community Investment	C 1.2.1 Community investment
	C 1.3 Long-ranging Investment	C 1.3.1 Long-term profitability
		C 1.3.2 Long-term business plan
	C 1.4 Profitability	C 1.4.1 Net income
		C 1.4.2 Cost of Production
		C 1.4.3 Price determination
C2 Vulnerability	C 2.1 Stability of Supply	C 2.1.1 Procurement channels
		C 2.1.2 Stability of supplier relationships
		C 2.1.3 Dependence on the leading supplier
	C 2.2 Stability of Market	C 2.2.1 Stability of market
	C 2.3 Liquidity	C 2.3.1 Net cash flow
		C 2.3.2 Safety nets
	C 2.4 Risk Management	C 2.4.1 Risk management
	C 2.5 Stability of Production	C 2.5.1 Guarantee of production levels
		C 2.5.2 Product diversification
C3 Product Quality and Information	C 3.1 Food Safety	C 3.1.1 Control measures
		C 3.1.2 Hazardous pesticides
		C 3.1.3 Food contamination incidents
	C 3.2 Food Quality	C 3.2.1 Quality standards
	C 3.3 Product Information	C 3.3.1 Product labelling
		C 3.3.2 Traceability system
		C 3.3.3 Certified production
C4 Local Economy	C 4.1 Value Creation	C 4.1.1 Regional workforce
		C 4.1.2 Fiscal commitment
	C 4.2 Local Procurement	C 4.2.1 Local procurement

Core Indicator name Internal investment (C 1.1.1)		
Dimension Economic	Theme Investment (C 1)	Sub-theme Internal Investment (C 1.1)
1. Description		
Investing in sustainability refers to the allocation and use of multiple resources (i.e. time, human resources, funds) to improve the enterprise performance at any of the dimensions: governance, environmental, social and economic. Improving the enterprise sustainability performance requires the commitment of the governance body and the capacity to generate change accordingly. Without proper investment allocation and oversight of this matter, it is less probable that an enterprise could make significant progress. Policies can be discussed and approved to modify and incorporate new practices to meet this aim. In this context, an enterprise establishes a system to monitor its own performance on a regular basis to be able to identify the areas of attention, improvement and oversee their evolution.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. The level of investment attributed to the development and maintenance of sustainable policies and practices might differ across enterprises as it depends on the type of areas of attention and improvement identified specific to that enterprise.		
3. Unit of Measurement or Metric		
This indicator measures the extent to which the enterprise has invested over the last 5 years into activities and practices to improve and monitor its social, economic, environmental and governance performance.		
4. How to Measure		
1. Review your business records and the decisions taken by the governance body to check for investment practices that have been implemented in your enterprise for monitoring and improving your sustainability performance. (e.g. improvement of employees salaries and benefits, investment in research and development, improvement of production efficiency, the implementation of practices that preserve and regenerate natural resources, the use of renewable energy, the adoption of a monitoring and evaluation system of sustainability performance). For additional guidance to identify activities and practices, please refer to the references listed in the “Sources of Information” section below. 2. Prioritize the activities and practices that you have implemented based on the results that you have achieved so far in terms of monitoring and improving your social, economic, environmental and governance performance.		
5. Rating		

Dark Green: SAFA score is reached if (all conditions must be fulfilled):

A monitoring system is in place to oversee the sustainability performance of the enterprise at social, economic, environmental and governance levels.

The prioritized activities and practices have targeted the improvement of the enterprise's sustainability performance.

The enterprise can demonstrate progress in its sustainability performance (e.g with Key Performance Indicators (KPI) during the last five years.

Unacceptable practices (any of the conditions can automatically lead to a **"Red"** SAFA score):

The enterprise has not implemented any investment practice in the last 5 years aimed at monitoring and improving its sustainability performance.

6. Limitations of the Core Indicator

This indicator does not measure if the activities and practices implemented have successfully monitored or improved the enterprise's sustainability performance. In addition, investing in sustainability does not guarantee effectiveness or actual progress in sustainability.

7. Sources of information

- Shared Impact Assessment and Measurement Toolbox (SIAMT) from The Finance Alliance for Sustainable Trade (FAST), version 1.0. Document FAST SIAMT Full List of Indicators at: <http://www.fastinternational.org/en/node/1704>
- COSITA from The Committee on Sustainability Assessment (COSA) at: <http://www.thecosa.org/>
- Sustainability Performance Assessment (SPA) from the Sustainable Agriculture Initiative (SAI) at: <http://www.saiplatform.org/activities/alias/sustainability-indicators/SPA>
- Fair and Sustainable Food Systems: from vicious cycles to virtuous circles, from the International Institute for Environment and Development (IIED) at: <http://pubs.iied.org/17133IIED.html?c=agric/food>
- ISO 26000: Guidance on social responsibility from the International Organization for Standardization (ISO) at: http://www.iso.org/iso/catalogue_detail?csnumber=42546

Core Indicator name Community investment (C 1.2.1)		
Dimension Economic	Theme Investment (C 1)	Sub-theme Community Investment (C 1.2)
1. Description		
Investing in a community refers to the allocation and use of multiple resources (i.e. time, human resources, funds) to address and contribute to resolve a community need (s). The enterprise's micro-environment includes the community where operations are taking place, so there is an organic relationship between the enterprise's activities and investments, and the community's sustainable development. Whether directly or indirectly, the enterprise's operations have an influence in the community.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. In order to have a complete assessment of an enterprise sustainability performance, it is necessary to review how its activities and investments are affecting the community (ies) that are within its influence, as they are not independent. For instance, the operations of a large enterprise in a given community overseas might affect negatively the quality of the water resources that serve the community, as waste management controls have not been established and toxic ingredients have polluted the water resources. For smallholders this indicator is also applicable. For instance, a group of farmers in a given community have decided to contribute to resolve the water scarcity problem by reforesting some hectares of land that are currently used for cultivation, and by establishing rainwater capture and storage systems.		
3. Unit of Measurement or Metric		
This indicator measures the extent to which the enterprise investments have contributed to meet community needs. Successful community investment does not compromise efficient use of resources, or fair and transparent relationships with the community, stakeholders and personnel.		
4. How to Measure		
1. List the social, economic, cultural, technical, environmental, organizational or other needs from the community to which your activities and investments contribute to address and meet. 2. Describe the way these activities and investments have been implemented in relation to the management of resources and the environment (i.e. soil, water, air, minerals, plants, forest, animals, atmospheric gases). 3. Describe the way these activities and investments have been implemented in relation to the enterprise's relationships and interactions with the community (including stakeholders in the industry and region) as well as employees and other individuals affected by the operations.		
5. Rating		
Dark Green: SAFA score is reached if (all conditions must be fulfilled): • The investments and activities implemented by the enterprise address and meet at least		

some identified community need. • There are records of multiple positive socio-economic and environmental impacts as a result of the enterprise' investments and activities implemented. • There is not a disproportionate or over-consumption of resources (i.e. financial, energy, natural) in the investments made. • Community beneficiaries acknowledge the effective and positive contribution of the enterprise to the community' sustainable development. Unacceptable practices (any of the conditions can automatically lead to a "Red" SAFA score): • The investments or activities implemented by the enterprise increase the community needs either directly or indirectly. • There are records of negative socio-economic or environmental impacts as a result of the enterprise' investments or activities implemented. • The investments or activities jeopardize community (ies) by over-consumption of resources (i.e. financial, energy, natural).
6. Limitations of the Core Indicator
This indicator does not determine what sustainable development of a community means explicitly; rather it provides some guidelines to facilitate the assessment of the contribution of the enterprise' investments to sustainable development of a community. The indicator does not provide guidelines to identify when resources are being over-consumed, as it is context specific.
7. Sources of information
• Definition of Community Development: <i>"Community Development is a process designed to create conditions of economic and social progress for the whole community with its active participation and fullest possible reliance upon the community's initiative"</i>, United Nations (1948), available in: United Nations (1953), <i>Report of the Mission on Rural Community Organization and Development in the Caribbean Area and Mexico</i>, New York • Definition of Sustainable Development: "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs", United Nations (1987), World Commission on Environment and Development, <i>Our Common Future</i>, Oxford: Oxford University Press p. 27 • The portal Comm Dev, Enhancing benefits to communities, from the International Finance Corporation (The World Bank Group) includes several publications and tools related to investing in sustainable community development: http://commdev.org/

Core Indicator name		
Long-term profitability (C 1.3.1)		
Dimension Economic	Theme Investment (C 1)	Sub-theme Long-ranging Investment (C 1.3)
1. Description		
Financial sustainability is a major pillar to ensure the enterprise' operations and growth in the long-term and over its life cycle. Investing to generate long-term profitability refers to the financial resources that the enterprise has allocated and applied to strength its capacity to generate and increase profits over the long term (e.g. research on product development, training programs for selected employees, acquisition of resources, such as land or businesses, equipment and facilities, the design and implementation of a marketing strategy). The enterprise needs to invest for long-term solvency and profitability in order to remain in business and to enhance its potential and growth. Investing to strength its capital structure (i.e. financial, natural, physical, human and social), as well as its competitive advantage in the marketplace are needed to guarantee a sound economic performance, financial responsibility and long-term success. Investments that aim to generate profits in the short-term and to meet only the existing financial needs and obligations do not necessarily guarantee business profitability of the enterprise over its life cycle; short-term business decisions do not necessarily ensure the enterprise' long-term viability.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has investments that aim to establish and reinforce the conditions to maintain, generate and increase the enterprise profits in the long-term.		
4. How to Measure		
1. Review your latest cash-flow statement referring to your operating, financial and investing activities. 2. Identify all investments that have been directed to generate profits over a period of at least a year and over a period of 5 years or more. Note: Definition of long-term: under accountability terms and definitions, long-term refers to a period of over 12 months; and short-term refers to a period of up to 12 months. In the cases to which this indicator refers to, it is probable that, according to the context and business nature of the enterprise, long-term might be considered as from over 5 or 7 years or more.		
5. Rating		
Dark Green: SAFA score is reached if (all conditions must be fulfilled): • The enterprise has done investments that aim to generate profits over a period of at least a year. • The enterprise has done investments that aim to generate profits over a period of at least five		

years.

- The enterprise has done investments to generate profits in the short-term and has met completely its financial needs and obligations of the current year.

Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score):

- The enterprise has not done any investment that aim to generate profits over a period of at least a year.
- The enterprise has not done any investment that aim to generate profits over a period of at least five years.
- The enterprise invests only to maximize its profit in the short term.

6. Limitations of the Core Indicator

This indicator does not specify what long-term is as a standard basis, as it depends on many factors, such as the business type of the enterprise and its context. However, it provides a reference point. Investing for long-term profitability does not ensure the business viability and growth of the enterprise during its entire life cycle, as other factors might affect its performance, for instance, the enterprise’s governance and management, external policies and regulations and market forces.

7. Sources of information

- Measuring Farm Profitability and Financial Performance, from the Canadian Agri-Food Policy Institute (CAPI): http://www.capi-icpa.ca/pdfs/CAPI-FARM-INCOME-REPORT_JUNE-12-2009.pdf
- Sustainable Livelihoods Guidance Sheets Performance, from the Department for International Development (DFID): www.eldis.org/vfile/upload/1/document/0901/section2.pdf
- SME Toolkit, Build your Business, from the International Finance Corporation (The World Bank Group): <http://www.smetoolkit.org/smetoolkit/en>
- Profitability Ratios: the Higher, the Better (mostly): the Five you Need to Know, from Harvard Business Press Chapters: <http://hbr.org/search/Joe%20Knight/0>

Core Indicator name		
Long-term business plan (C 1.3.2)		
Dimension Economic	Theme Investment (C 1)	Sub-theme Long-ranging Investment (C 1.3)
1. Description		
A long-term business plan is a document that describes the current status of a business, its aims and objectives, and sets out the strategy leading to their achievement over a minimum 5 years period. The structure of a business plan contains several sections including: product and customer descriptions, marketing strategy, operational plan, and a financial section. The marketing plan contains a market analysis describing: the market as a whole, industry trends and target market in terms of customer profile and market potential; a competitive analysis of the threats and risks the enterprise could face and a market strategy outlining sales terms, pricing policy, selling, distribution and customer service. The operational plan looks at the development and production of products or services. The financial plan takes into account: the financial history, financial projections (financial statements (balance sheet, income statement and cash flow) and the potential returns for investors. The role of a business plan is to: 1. Provide an up-to-date assessment of the enterprise' growth path, including major achievements. 2. Present the strategies moving forward with the remaining objectives in a timeline. 3. Show pro-forma financial statements with realistic financial assumptions for a minimum 5 year period. 4. Clearly present the funds needed to be raised, and how they will be implemented. Depending on its perspective, the business plan may be an organizing tool that outlines the enterprise' strategy to improve performance, or a selling vehicle used to raise capital for the development and expansion of the enterprise.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. Having a business plan is essential for entrepreneurs, regardless of their existing or intended position in the supply chain. It helps them assess their vision of the future, scrutinize each aspect of their business and address existing issues. Notwithstanding the size of the enterprise, the business plan is an essential tool. Larger enterprises use the business plan in the day to day management process as a decision- supporting tool that could be used to monitor and to measure the impact of each project, product or initiative. The business plan is also an essential assessment instrument for the smaller enterprise, whose survival is critically dependent on each action.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has a business plan or an up-to-date document articulating revenue streams, growth plan, and an operational action plan that projects the generation of financial resources for the future.		
4. How to Measure		
1. Review your business records, especially at the governance and management level, and check whether the enterprise has an up-to-date business plan with all of the elements. 2. If so, review the business plan and check in the production, market and financial section		

whether the plan outlines in detail how the enterprise is planning to generate revenue streams for a minimum 5 year period.

3. Review the business plan and assess its content in terms of viability and accuracy.

5. Rating

Dark Green: SAFA score is reached if (all conditions must be fulfilled):

- The enterprise has a complete and up-to-date business plan that outlines the strategy to be implemented and objectives to achieve for at least a minimum 5 year period.
- The business plan details and explains with accuracy a viable financial plan that presents the cash-flow projections for a minimum 5 year period and additional information regarding how the enterprise plans to generate revenue streams to this reference period.
- The enterprise has implemented steps towards progressing in its long-term strategic, business and financial objectives.
- All the employees know the business plan, its objectives and targets, and their respective annual operating plan is designed in alignment with the business plan.
- Smallholder operations – while a written or otherwise documented business plan may not be in place, evidence of planning for the future that at least addresses the next few years is necessary. Investment in the business should be a clear and regular practice, and plans for cash-flow and profitability should be clear.

Unacceptable practices (any of the conditions automatically lead to a “Red” SAFA score):

- The enterprise does not have a business plan or an up-to-date document articulating revenue streams, growth plan, and an operational action plan that projects the generation of financial resources for the future.
- The enterprise is not making any step towards developing a business plan for its long-term strategy.
- The enterprise has an incomplete business plan, and does not include the objectives to achieve, and the strategy to implement for a minimum 5 year period. The plan does not include either any financial projection that presents how the enterprise plans to generate revenue for a minimum 5 year period.

6. Limitations of the Core Indicator

- The fact that the enterprise has a complete business plan, it does not guarantee its full implementation and achievement of objectives. It is essential for the enterprise to have a monitoring and evaluation system in place to review and assess on a regular basis (i.e. semi-annual or annual) the progress accomplished to achieve the short and long term objectives.
- Incomplete business plans can provide an unbalanced analysis and bring about erroneous conclusions that lead to wrong decisions that could cause financial loss and business collapse.
- Business plans can suffer from “narrow vision” that can limit business opportunity and growth potential.

7. Sources of information

- Plan de Negocios para Micro-Empresarios Rurales (Document available only in Spanish), from PROMER-FIDA at the Rural Finance Learning Center:
<http://www.ruralfinance.org/library/business-support-services/marketing-support/marketing-support-details/en/?srec=11244&t det=training&t det2=&t det3=2&referer=>
- How to prepare your business plan, from United Nations Conference on Trade and

Development (UNCTAD): unctad.org/en/Docs/iteiia5_en.pdf

- Agriculture Business Planning Workbook, Colorado State University:
<http://www.coopext.colostate.edu/ABM/agplanningworkbook.pdf>

Core Indicator name Net income (C 1.4.1)		
Dimension Economic	Theme Investment (C 1)	Sub-theme Profitability (C 1.4)
1. Description		
Net income is a business activity index that helps effectively measure the enterprise's profitability and financial sustainability over time. This indicator is a thorough performance reporting mechanism, which spells out the enterprise's financial viability. On one hand, it contributes to the calculation of financial ratios - among others the profit margin and price-to-earnings-, which help establish the evolution and financial health of the enterprise. On the other hand, net income is one of the most significant financial measures, tracked constantly by owners since their return is derived from the profit generated during each reporting period. Fluctuating, as well as negative net income may indicate the presence of diverse issues that need the close attention of the management and governance body. Note: Net income does not indicate the amount of cash the enterprise makes because it also includes several non-cash expenses, like amortization and depreciation, and is vulnerable to aggressive accounting practices related to cost/revenue recognition.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of enterprises, at all levels of the food chain. Smallholder primary producers are expected to at a minimum, make a simple calculation of expenditures minus production-related revenues, and are encouraged to adopt more sophisticated analysis of net income over time.		
3. Unit of Measurement or Metric		
This indicator measures whether the total revenue earned by the enterprise in the last five years associated with producing the goods and services sold by the enterprise exceeds the total expenses, including interests and taxes.		
4. How to Measure		
1. Review your income statement for each year of the last five years and check for the "total revenue earned" resulting from all business activities. 2. Review your income statement for each year of the last five years and check the "total expenses" that the enterprise has incurred, including all the operating expenses, interest, taxes and preferred stock dividends when applicable. 3. Calculate the net income as the difference between the total revenue earned and the total expenses for each year. Note: definition of earned revenue: total revenue resulting from all business activities during a given period; definition of total expenses: all the operating expenses, interest, taxes and preferred stocks dividends when applicable. Negative profit is undesired; it represents a sign of poor performance since the total revenue generated during the reporting period does not cover all the expenses incurred to create those sales.		
5. Rating		
Dark Green: SAFA score is reached if:		

- The resulting net income is greater than 0 in each year of the last five years. Positive net income is expected in every reporting period. Temporary negative net income is not necessarily unfavorable, as in the case of seasonal crop producers negative profits might be part of their business cycle.
- Net income grows from one year to the other, or within the 5-year period. To calculate the growth: $(\text{Net Income in reporting period 2} - \text{Net Income in reporting period 1}) / \text{Net Income in reporting period 1}$.
- The enterprise has capitalized itself with own financial resources during the 5-year period. It could be measured with the following ratio:
 - a) Total Debt-Total Assets ratio decreases in the period $(\text{Short-Term Debt} + \text{Long Term Debt}) / \text{Total Assets}$ or
 - b) Total Debt-to-Capital ratio decreases in the period $(\text{Total Debt (Short-term/long-term)}) / (\text{Shareholders' equity} + \text{Total Debt})$

Unacceptable practices (automatically lead to a “Red” SAFA score):

- The resulting net income is 0 or below (negative) in each year of the last five years.

6. Limitations of the Core Indicator

There are also other indicators that could be useful to measure profitability and complement Net Income, such as Return on Assets (ROA), Return on Equity (ROE), Earnings per Share (EPS), or Gross Profit Margin (GPM).

7. Sources of information

- SME Toolkit, Build Your Business, Financial Literacy Section, from the International Finance Corporation (the World Bank Group): <http://www.smetoolkit.org/smetoolkit/en/category/5236/Financial-Literacy>
- Impact Reporting Investment Standards (IRIS), from the Global Impact Investment Network (GIIN): <http://iris.thegiin.org/iris-standards>
- Shared Impact Assessment and Measurement Toolbox (SIAMT) from The Finance Alliance for Sustainable Trade (FAST), version 1.0. Document FAST SIAMT Full List of Indicators: <http://www.fastinternational.org/en/node/1704>

Core Indicator name Cost of production (C 1.4.2)		
Dimension Economic	Theme Investment (C 1)	Sub-theme Profitability (C 1.4)
1. Description		
The cost of production is an economic or accounting indicator that refers to the costs incurred by the enterprise during a given time period to acquire and transform direct materials so as to produce and sell revenue generating products, goods and/or services. Since there is a clear connection between cost management and strong performance, different cost classification systems have been structured. Each is intended to address an opportunity for improvement for the enterprise. The unit cost of production is also used to calculate the break-even point, which is the point (price per unit of product sold) at which the total cost of production and revenue are equal, thus, the enterprise does not have a net loss or gain. The precondition of a viable enterprise is summarized as: the total cost of production must be less than the total revenue. A margin of safety of over 10 % should be the goal of all for-profit enterprises, whereas a margin of safety of between 0 – 5 % constitutes the lower limit of profitability. Non-profit companies can set the goal to attain and maintain the break-even point.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. The cost of production is a truly comprehensive accounting and performance reporting measure, crucial to many business decisions. Its monitoring allows organizations to track performance, optimize production, and become more competitive. While cost control and its reduction remain the priority irrespective of the size of the enterprise, the development of competitive strategies differs. Larger enterprises (in general terms of acreage or labor force) can take advantage of economies of scale; they are also better suited to optimize their working processes through mechanization or automatization of tasks. These mechanisms drive down the production costs and render the enterprise more competitive in the marketplace through lower priced products. In opposition, the smaller enterprises may achieve competitive advantage through tighter cost control, as the reduced volume of their transactions affords them more visibility over the cost drivers, and the differences are detected as they occur.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has completed a process to determine the total cost of the products sold and per unit of production using currency, and has calculated the break-even point.		
4. How to Measure		
- Based on different cost classification systems, the total cost of production can be calculated in various ways, and the most used is derived as the sum of direct and indirect costs of production. - Review your business and accounting records and check for the cost of production, direct and indirect, of the products, goods or services produced in a given period. - Verify if the total cost of production results of adding up the direct and indirect cost incurred in the production of the goods, products or services for the period. - Check and verify if the cost of unit of production has been calculated as the total costs of production divided by the units of product, goods or services produced in the period. - Check whether the enterprise has determine the break-even point for each product,		

goods or service

Note: The direct cost of production are represented by the direct materials costs and direct manufacturing labor costs, that are directly traceable to the production of goods, products and services (i.e. purchase of seeds, fertilizers or crops to farmers).

The indirect costs are those costs that cannot be directly attributed to the production expenses, although they represent an inherent part of it (i.e. the warehousing cost of the materials held in view of production, electricity cost).

5. Rating

Dark Green SAFA score is reached if:

- The enterprise registers effectively and systematically all the costs incurred in the production of the goods, products and services for each year.
- The enterprise calculates the total cost of production for all the products, goods and services produced in the period.
- The enterprise calculates the cost per unit of production of each product, goods or service produced.
- The enterprise calculates the break-even point for each product, goods or service produced in the year.
- The correspondent employees of the accounting, production and commercial department are trained and informed on the cost of production and the break-even point of each product.

Unacceptable practices (all conditions must be fulfilled to lead to automatically lead to a “**Red**” SAFA score):

- The enterprise does not record the costs of production, direct and indirect, in an effective and systematic way;
- The enterprise has not calculated the total cost of production of the goods, products or services produced for the period year;
- The enterprise has not calculated the cost per unit of production of each product, goods or service produced;
- The enterprise has not calculated the break-even point for each product, goods or services produced;
- The enterprise has not implemented any steps towards training the correspondent employees in basic accounting to calculate the cost of production and break-even point.

6. Limitations of the Core Indicator

The calculation of this indicator is subject to generally accepted adaptations, but can be easily determined at any time. The accounting practices are dynamic and evolve gradually over time periods.

There is no conclusive across-the-board procedure applicable to all industries.

7. Sources of information

- Production Cost, in Economic Engineering applied to the fishery industry, from FAO Corporate Document Repository: <http://www.fao.org/docrep/003/v8490e/v8490e06.htm>
- Cost of Production Guide, from the Caribbean Research and Development Institute:
- <http://www.cardi.org/wp-content/uploads/2011/02/Cost-of-Production-Guide-by-A-Iton-Tech-Bulletin.pdf>
- Break even point and profitability analysis of rice farming through integrated crop management in Lebak district, Banten, at the Indonesian Journal of Agriculture 3 (2), 2010:

127: 130: <http://pustaka.litbang.deptan.go.id/publikasi/ja032109.pdf>.

- Financial analysis techniques employed in agriculture, presented at the International Conference on Applied Economics – ICOAE 2009:
<http://kastoria.teikoz.gr/icoae2/wordpress/wp-content/uploads/articles/2011/10/018-2009.pdf>

Core Indicator name		
Price determination (C 1.4.3)		
Dimension Economic	Theme Investment (C 1)	Sub-theme Profitability (C 1.4)
1. Description		
Price determination represents the enterprise decision regarding the amount at which its products or services can be sold. This decision affects the revenue earned, as well as the profits generated by the enterprise, and it is closely linked with the unit cost of production. The setup value of this measure is influenced by three major factors: customers, competitors, and costs. The amplitude of the mark-up (the difference between the selling price and the cost per unit of production) depends on the perceived quality or scarcity of the product or service, and on the revenue category of the clientele. For most products, goods and services it is brought forward by the choice of a markup intended to gain a target rate of return on investment of: • Excellent: more than 50 % profit margin • Very good: between 25 – 50 % profit margin • Moderate: between 10 – 25 % profit margin • Little: between 5 – 10 % profit margin A profit margin between 0 – 5 % constitutes the lower limit of profitability or is defined as non-profitability, since, at this level, the profit dissipates easily as a consequence to stochastic demand.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. Price determination depends on the type of enterprise, the goods produced, and the market concentration. In the case of commodities (i.e. like grains, wheat, rice) it is more likely that the market sets the price. In less competitive product markets, the management team has leverage in establishing what to charge for its products, goods and services. The relevance of the price determination is to ensure that the selling price is above the break-even point and it includes a mark-up to ensure the enterprise makes a profit.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has considered the break-even point to negotiate the selling price with the buyer(s), using currency.		
4. How to Measure		
• Review your business and accounting records for a given period • Check for the selling price of the products, goods and services sold by the enterprise in this period • Compare the selling price with the break-even point of each product, goods, or services		
5. Rating		
Dark Green SAFA score is reached if (as many of the following conditions must be fulfilled as feasible): • Those who sell the products, goods and services are aware of the break-even point and the expected profit margin to be obtained with the selling price; • The full cost of unit of production is recovered, and the profit is generated through a mark-		

up, as the selling price results from the combination of actual costs and mark-up;

- There are records that reveal the enterprise's negotiation capacity to negotiate the selling price based on the break-even point and expected profit margin.

Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score):

- The full cost of unit of production is not recovered;
- Those who are responsible for the selling of the products, goods or services don't know the break-even point of each product, or the expected profit margin;
- The enterprise has not implemented any steps to improve the conditions lying behind the fact that the cost of unit of production is not recovered (i.e. production efficiency, product quality, bargaining power).

6. Limitations of the Core Indicator

The practice of price determination varies greatly by industry. There is no a standard setting for all pricing decisions because the calculation of product cost is subject to generally accepted adaptations. The profit margins are also a generic indicative, as depending on the enterprise type of business along the food chain and the type of product, profit margins ranges could be different with a smaller scale.

7. Sources of information

- Agricultural and Food Marketing Management, from FAO Regional Office for Africa:
<http://www.fao.org/docrep/004/w3240e/w3240e08.htm>
- Collective Marketing for Smallholder Farmers, Manual 4: The Territorial Approach to Rural Agro-Enterprise Development, from FAO:
http://www.fao.org/sd/erp/toolkit/BOOKS/manual4_collectivemarketing.pdf
- Profit Making for Smallholder Farmers, Proceedings from the 5th MATF Experience Sharing Workshop, from the Food and Agriculture Research Management (FARM)-Africa:
<http://www.farmafrica.org/downloads/resources/MATFGrantholders-Report.5.pdf>

Core Indicator name		
Procurement channels (C 2.1.1)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Stability of Supply (C 2.1)
1. Description		
Procurement channels refers to the ways the enterprise obtains its input supplies (i.e. seed, fertilizers, semi-elaborated products, food ingredients, equipment, materials, packaging, paper, goods and services) required to produce the product (s) to be sold in the market or to offer the core enterprise' service (s) to clients. Ensuring that inputs, goods and services, are delivered on time, reduces the enterprise's vulnerability and risk exposure to suppliers that might affect reaching the expected production levels, or delivering the type and quality of service offered. There are several strategies that the enterprise can implement in order to reduce this potential risk and to guarantee the production process, as well as meeting existing commitments with buyers and clients. For instance: diversification of suppliers, building stable and mutually beneficial business relationships with them, based on trust and competitive conditions (i.e price and benefits), and the identification of alternative procurement channels that can be easily accessible in case of need.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures the extent to which the enterprise has implemented actions and mechanisms to ensure stable supply and reduce the risk to have input supply shortages. This includes maintaining ongoing business relationships with suppliers.		
4. How to Measure		
1. Review your business records and the decisions taken by the procurement department to check for actions and mechanisms that have been put in place to ensure input supply. 2. Prioritize the actions and mechanisms that you have implemented based on the results that you have achieved so far in terms of ensuring input supply.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The actions and mechanisms implemented have targeted maintaining business relationships with a number of suppliers that could guarantee the required input supply. • The actions and mechanisms implemented enable the access to alternative procurement channels in case current suppliers fail to provide the required inputs. • Since the implementation of such actions and mechanisms, there are no records of input supply shortages, or periods during which the enterprise has failed to meet the expected volume of production on time or to deliver the service offered. Unacceptable practices (any of the conditions can automatically lead to a "Red" SAFA score): • No actions and mechanisms have been implemented to guarantee the required input		

supply.

- There are records of input supply shortages that have undermined the production process and the delivery of products and services to the market.

6. Limitations of the Core Indicator

This indicator does not specify what is the appropriate number of suppliers the enterprise might need to have to guarantee its input supply, as it is subject to each particular case. Similarly, the strategies that the enterprise can implement to have a diversified supply structure, as well as the access to alternative supply channels, do not completely guarantee the stability of supply.

7. Sources of information

- Stability in Supply Chain Networks, in American Economic Review, 2008:
<http://faculty-gsb.stanford.edu/ostrovsky/papers/chains.pdf>
- International Sourcing and Supply Chain Stability, University of Massachusetts, Boston:
www.faculty.umb.edu/david_levy/JIBS95.pdf
- Rapid Agricultural Supply Chain Risk Assessment: A Conceptual Framework, from the World Bank, Agriculture and Discussing Paper, No 47:
http://www.agriskmanagementforum.org/sites/agriskmanagementforum.org/files/Documents/RapApRiskAssessment_Framework_Final_Web.pdf

Core Indicator name		
Stability of supplier relationships (C 2.1.2)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Stability of supply (C 2.1)
1. Description		
Stability of suppliers' relationships refers to the absence of excessive fluctuations in the linkages that the enterprise maintains with its suppliers. It could improve the performance of both stakeholders and contribute to minimize the enterprise' vulnerability to procure the required input supplies at the appropriate time. Suppliers that maintain a mutually beneficial business relationship with the enterprise for long periods of time contribute to the overall stability. There are factors that could influence building stable relationships with suppliers. For instance: make effective the payments on time; offer a fair and competitive price to them that benefit profit generation of both parts; provide adequate lead times and support as appropriate the resolution of suppliers' needs; personalize the relationship and contribute to improve their products, advance them finance, and keep suppliers informed of the enterprise progress and developments.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. Primary producers are asked about their relations to their input suppliers (feed, fertilizer, seeds, agrochemicals, etc.).		
3. Unit of Measurement or Metric		
This indicator measures the share of supplier contracts/business relationship that has remained on-going over the last 5 years, or since the enterprise is in business for a period of less than five years.		
4. How to Measure		
1. Review your business records from the procurement department for the last five years, or for the maximum number of years the enterprise is in business, if less than five years. 2. Identify all the suppliers with whom the enterprise has had contracts or business relationships during this period. 3. Calculate the share of suppliers with whom the enterprise has maintained a contract or business relationship over this period.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The share of contracts/business relationship with suppliers that enhance business development based on fair and beneficial terms and conditions and which has remained on-going over the last 5 years is 100% • The contracts/ business relationships maintained with the suppliers benefit the enterprise (i.e delivery of inputs, quality, and reasonable price); Unacceptable practices (any of the conditions can automatically lead to a "Red" SAFA score): • The share of contracts/business relationship with suppliers that enhance business development based on fair and beneficial terms and conditions and which has remained		

on-going over the last 5 years is 0%

- In each year of the period the enterprise has modified its supplier structure;
- There are records of unfavorable practices the enterprise has had with any of its suppliers during the last five years.

6. Limitations of the Core Indicator

This indicator assumes that maintaining a business relationship with suppliers is favorable for the enterprise. However, there may be instances where it could be more favorable for the enterprise to discontinue such relationship.

7. Sources of information

- Managing Sustainable Global Supply Chains, Framework and Best Practices, from Network for Business Sustainability: <http://nbs.net/wp-content/uploads/NBS-Executive-Report-Supply-Chains.pdf>
- Developing Sustainable Agricultural Supply Chains (Video), from the Sustainable Agricultural Initiative Platform (SAI): <http://www.farmcentre.com/videos/developing-sustainable-agricultural-supply-chains-peter-erik-ywema-sai-platform#sthash.8dElqrMB.dpuf>
- Think Big, Go Small, Adapting Business Models to Incorporate Smallholder Farmers into Supply Chains, from Oxfam International: <http://www.oxfam.org/sites/www.oxfam.org/files/b4b-think-big-go-small.pdf>.
- Safeguarding corporate social responsibility (CSR) in global supply chains: how codes of conduct are managed in buyer-supplier relationships, at the Journal of Public Affairs: <http://onlinelibrary.wiley.com/doi/10.1002/pa.232/pdf>

Core Indicator name		
Dependence on the Leading Supplier (C 2.1.3)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Stability of supply (C 2.1)
1. Description		
Dependence on the leading supplier refers to the conditioning or subordinated status that the enterprise has versus a supplier, which is determined by the relative weight or importance this supplier has in procuring the amount of required inputs supplies (i.e. seed, fertilizers, ingredients, products) to the enterprise. Diversifying the enterprise supply structure helps to have the capacity and flexibility to face and to resolve any kind of problem the enterprise could face in the market. It also reduces supply risk default. Having a large number of suppliers does not mean necessarily that the supply chain is diversified. It is equally important to assist and train the suppliers on what the enterprise expects from them, and what will do the enterprise with the inputs provided. The enterprise can also benefit from the competitive advantage of having a diversified range of suppliers, as each of them could offer distinctive attributes and product differentiation (i.e. price, innovation, quality). By having a diversified supply chain structure, the enterprise also contributes to build strong corporate-community ties and to enhance business growth of its suppliers.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures the share of the input supplies that come from the leading supplier.		
4. How to Measure		
1. Review your business records from the procurement department and check for the total volume of input supplies that was purchased during the last year, by type of input (i.e. seeds, fertilizers, packaging). 2. Identify all the suppliers that have sold inputs to the enterprise during the last year and check the total amount of inputs procured by each supplier, by type of input. 3. Calculate the share of each supplier of the total volume of inputs procured, by type of input. Note: only consider those inputs that are more relevant to the enterprise, and to which the enterprise' business is more sensitive.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise has conducted a risk analysis of its supply chain to identify its level of vulnerability to certain input supplies and suppliers. • The enterprise has developed and implemented a strategy to minimize the supply risk and to establish a diversified supply structure when it is more appropriate. • For the cases in which supply diversification is recommended, the share of the input supplies that come from the leading supplier does not exceed the 50%. Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score): • The share of the input supplies that come from the leading supplier is 100%, by type of input.		

- There are records that reveal that the enterprise has an unfavorable level of vulnerability to certain input supplies and suppliers.
- The enterprise has not implemented any steps towards reducing its supply risk.

6. Limitations of the Core Indicator

There are also limitations of having a diversified supply chain, as in some cases, the enterprise could miss the benefits of the economy of scale, when a supplier sells a larger amount of input at a more competitive price. The enterprise should also do a cost-benefit analysis alongside the supply chain risk analysis in order to determine what level of diversification is the most effective and recommended for its situation.

7. Sources of information

- Rapid Agricultural Supply Chain Risk Assessment, Conceptual Framework and Guidelines for Application, from Agriculture and Rural Development, The World Bank:
<http://siteresources.worldbank.org/INTCOMRISMAN/Resources/RapidAgriculturalSupplyChainRiskAssessmentConceptualFramework.pdf>
- Supply Chain Risk Assessment: Cocoa in Ghana, from the World Bank:
<http://www.agriskmanagementforum.org/farmd/sites/agriskmanagementforum.org/files/Documents/Ghana%20Cocoa%20SCRA%20Report%202011%20ARMT.pdf>

Core Indicator name		
Stability of market (C 2.2.1)		
Dimension Economic	Theme Vulnerability (C2)	Sub-theme Stability of Market (C 2.2)
1. Description		
Marketing channels refers to the ways the enterprise ensures the transfer and sale of the products and goods to the next stage of the food chain and to the final consumer. Key tasks include: making contact with potential buyers, negotiating price and conditions, contracting, transferring the products and goods. The ultimate goal of the marketing channels is to guarantee that the products or goods are sold at an appropriate time, and the enterprise earns revenue. Ensuring that the products and goods are sold at the appropriate time is a major business target. In order to guarantee this success, the enterprise requires designing and implementing a marketing strategy to identify potential buyers that could meet the enterprise expectations and could eventually purchase its products and goods. Market risk could be significantly reduced through the establishment of stable business relationships with a diversified number of buyers. Furthermore, it could be minimized through the identification of alternative marketing channels that could be accessible when contracts, agreements or relationships are discontinued.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to primary production and processing levels of the supply chain.		
3. Unit of Measurement or Metric		
This indicator measures the extent to which the enterprise has guaranteed its stability in the market through the implementation of actions and mechanisms to ensure a diversified and consolidated income structure from the product sales.		
4. How to Measure		
1. Review your business records and the decisions taken by the commercial department to check for actions and mechanisms that have been put in place to ensure a diversified and consolidated income structure. 2. Prioritize the actions and mechanisms that you have implemented based on the results that you have achieved so far in this regards. 3. Calculate your income structure and determine the number of years the enterprise has an on-going business relationship with each buyer. Guidance notes: • To measure a diversified income structure, two data points are needed: number of buyers and income share per buyer. • To measure a consolidated income structure, the following data points could be of reference: number of years of business relationship with each buyer, or type of business relationship established (i.e. with formal written agreements, regular communication).		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled):		

- The actions and mechanisms implemented have targeted a diversified income structure with at least three or more buyers, where no buyer is responsible for more than 50% of the annual income obtained from the products sold.
- The actions and mechanisms implemented have targeted a consolidated income structure where buyers have maintained a business relationship for at least more than a year with written contracts or agreements.
- The actions and mechanisms implemented allow the enterprise accessing alternative marketing channels in case contracts, agreements or business relationships are discontinued.
- Since the implementation of such actions and mechanisms, there has been no records of related financial losses as all products or goods have been sold.

Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score):

- One buyer is responsible for 100% of the annual income obtained from the products sold.
- The income structure of the enterprise is made of one or two buyers only.
- No actions and mechanisms have been implemented to enhance a diversified and consolidated income structure.
- There are no written records regarding the sales agreement or the purchase order from the buyer.
- There are records of financial losses as the enterprise hasn’t been able to sell the products or goods at the appropriate time, and it has kept a large and unnecessary level of inventory, when applicable.

6. Limitations of the Core Indicator

This indicator does not specify what is considered as the most appropriate diversified and consolidated income structure as it is context specific. This indicator also assumes that maintaining a business relationship with a buyer is positive; however there are cases where it could be more beneficial to the enterprise to discontinue such relationship.

7. Sources of information

- The portal Agriculture Risk Management from The World Bank provides access to several publications and tools regarding risk management in agriculture supply chains: <http://www.worldbank.org/agrm>.
- The portal USD Economic Research Service, from the United States Department of Agriculture, provides access to several publications and tools regarding risk management strategies in the agriculture sector, including market risk: <http://www.ers.usda.gov/topics/farm-practices-management/risk-management/risk-management-strategies.aspx#.UclmEoX1x8o>
- The portal FARM (Forum on Agriculture Risk Management in Development) provides access to publications related to risk management tools in the agriculture sector in developing countries: <https://www.agriskmanagementforum.org/content/basic-concepts>
- Smallholder Risk Management in Developing Countries, from the OECD: http://www.oecd-ilibrary.org/agriculture-and-food/smallholder-risk-management-in-developing-countries_5k452k28wjil-en

Core Indicator name Net cash flow (C 2.3.1)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Liquidity (C 2.3)
1. Description		
Net cash flow is one of the most critical financial measures as it indicates the enterprise's financial strength. It is a key indicator that measures the liquidity level required to meet the financial commitments of the enterprise When the balance of cash is positive (cash inflows exceed cash outflows), the enterprise can ensure its functioning and is economically viable over time. Positive net cash flow is pivotal for an organization's capacity to grow by investing in future projects. On the other hand, a negative cash flow puts the enterprise in the undesirable situation of not being able to meet its obligations - a cash flow crunch-, which can lead to insolvency. However, short-term negative cash flow isn't always a sign of poor financial health. It can indicate the expansion of the enterprise, and can be offset by borrowing. It summarizes the movement of cash into and out of the enterprise. The indicator can be derived from the cash flow statement. It represents the sum of cash flow from operations, cash flow from investing, and cash flow from financing. Additionally, it can be assessed by calculating the period-over-period change in cash on the balance sheet.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures the net cash flow generated by the enterprise in the last five years.		
4. How to Measure		
1. Review your cash flow statement for each year of the period and check for the total cash inflows and cash equivalents registered for your operating, financial and investing activities. 2. Review your cash flow statement for each year of the period and check for the total cash and cash equivalents outflows registered for your operating, financial and investing activities. 3. Calculate the net cash flow as the difference between the total inflows and the total outflows. Guidance notes: Net cash flow equals inflows less outflows of cash and cash equivalents related to: • operating activities: they are the principal revenue-producing activities of the enterprise and other activities that are not investing or financing; • investing activities: they refer to the acquisition and disposal of long-term assets and other investments that are not considered to be cash equivalents; • financing activities: they are activities that result in changes in the size and composition of the contributed equity and borrowings of the enterprise.		
5. Rating		
Dark Green SAFA score is reached if:		

- Assessing a company's comprehensive free cash flow ratio; although there is no performance-tier system based on an exact percentage, the higher the ratio the better.
- Net cash flow is above 0 (positive). The organization should record positive year-over-year net cash flow. Short-term negative cash flow is accepted only if the organization has set up precautionary measures, like a bridge loan, which will help it survive unexpected cash shortfall situations.

Unacceptable practices (automatically lead to a “Red” SAFA score):

- Net cash flow is below 0 (negative) for each year of the period. Negative cash flow balances put an organization at risk of becoming insolvent and cease to exist. While planning to invest in new plant and equipment, the enterprise needs to ensure that the investment will pay off and generate a positive net present value.

6. Limitations of the Core Indicator

This indicator measures the liquidity level of the enterprise by calculating the net cash flow that result from different activities that the enterprise implements, including for instance, the disposal of a credit line, but it does not necessarily measure directly the ability of the enterprise to access credit or insurance.

7. Sources of information

- Impact Investment Reporting Standards (IRIS) from the Global Impact Investment Network (GIIN): <https://iris.thegiin.org/iris-standards>

Core Indicator name Safety nets (C 2.3.2)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Liquidity (C 2.3)
1. Description		
“Safety nets” refers to the programs, institutions, networks, social relationships, instruments and mechanisms that could support the enterprise to withstand any individual or systemic shock. The need to access safety nets is critical, especially in periods of crises, when for instance the enterprise faces a lack of cash-flow and is not able to meet its short-term financial obligations (e.g. payment of loans, payment of salaries, purchase of inputs, seeds). Safety nets can be classified as formal and informal. Formal safety nets are those which legally guarantee the enterprise access to financial, economic or social support (i.e. banks, micro-credit institutions, public social programs, government transfers of food or cash). Informal safety nets provide= likelihood of support to the enterprise to cope with the risk and vulnerable situation is facing, but with no legal guarantee (i.e. family, friends, community groups and institutions, NGOs). The enterprise could have access to a number of options to guarantee its financial security and stability; they all constitute its financial safety net. The lack of access to formal markets and services in developing countries has influenced the growth of informal safety nets, especially in poor rural areas. Agricultural activities are more vulnerable to shocks, and formal institutions for risk management are less developed. There could be direct benefits for the enterprise from accessing safety nets: reduction of uncertainty, increase of incentives to invest in more risky and more profitable initiatives, reduction of income volatility, and protection against financial liquidity crises.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. While large enterprises can tap into numerous financing sources due to their access to capital markets, small enterprises may supplement their financing with more informal mechanisms because they have limited access to formal financial sources.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has access to formal and informal financial sources to withstand liquidity crises.		
4. How to Measure		
- Review your business records and check whether the enterprise has access to financial resources through safety nets. Some examples could be: - trade credit - bank credit provisions (bridge loans or lines of credit) - credit insurance, factoring (third party company purchase of receivables) - explicit government supported guarantees for financial obligations - Individual and group-based sources of capital - micro-credit institutions - insurance groups. - Review your business records and recent cash-flow statements and check whether the		

enterprise has had any liquidity crises in the past and verify how it was resolved. 3. Review any risk analysis the enterprise has conducted and check for the major risks that were identified that could have more negative impact in the enterprise' performance.
5. Rating
The strength of the safety net of the enterprise depends on the variety and number of financing options available. The lack of these provisions can make the difference between a business' survival and failure. Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise's safety net includes a sufficient number of financing sources that maintain its capital flow. • When applicable, the enterprise has resolved with success any liquidity crises faced. • The risk analysis conducted to the enterprise does not recognized financial liquidity as a major risk. <u>Unacceptable practices</u> (any of the conditions can automatically lead to a "Red" SAFA score): • The financing is maintained from one source with no alternative back-up financing solutions; • The enterprise has not implemented any step to improve its financial security and stability; • Financial liquidity is a major risk faced by the enterprise.
6. Limitations of the Core Indicator
The access to safety nets does not guarantee the financial security and stability of the enterprise. The efficacy of the financial safety net depends on the reliability of its components (i.e. institutions, programs, mechanisms, community groups).
7. Sources of information
• The rural sector and informal safety nets, from Agricultural and Development Economics Division, FAO: ftp://ftp.fao.org/es/esa/roa/pdf/5_Buffer/Buffer_Mexico2.pdf • Social safety nets and food security crisis, FAO: http://www.fao.org/fileadmin/user_upload/ISFP/Social_safety_nets.pdf • Graduating the poorest into micro-finance: linking safety nets and financial services, from CGAP at at the Rural Finance Learning Center: http://www.ruralfinance.org/discussion/en/?no_cache=1&srec=11325&tdet=training&tde t2=&tdet3=2&referer=MTA1MTY%3D

Core Indicator name		
Risk management (C 2.4.1)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Risk Management (C 2.4)
1. Description		
A risk adaptation and mitigation plan is a structured set of actions and mechanisms to implement to prevent, manage and reduce the extent to which the enterprise is exposed to internal and external risks (s), its (their) likelihood of occurrence, and to minimize its (their) possible negative impact. Some risks the enterprise could be exposed to include: price, production, market and credit risk, unstable employment relations, unavailability of workforce, conflicts with the community and other stakeholders, natural disasters and climate change. Internal risks are those that the enterprise can have more control on within the scope of the business (e.g. accidents at the workplace). External risks are those risks that the enterprise does not have any control on (e.g. heavy rains). The development and implementation of a risk adaptation and mitigation plan is required to strength the enterprise capacity to for instance, reduce the likelihood of occurrence of internal risks to minimum levels (i.e. the establishment of attractive conditions for the employees to prevent their mobility), or to reduce the negative impact of external risks (i.e. the installation of fire roads across the cultivated land to prevent the expansion of an uncontrolled fire).		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. Every enterprise along the food chain is exposed to different types of risks that might threaten the business and could have a negative impact in the enterprise performance, growth, its stakeholders and beneficiaries.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has put in place a plan to reduce and adapt itself against risks that could potentially threaten the business.		
4. How to Measure		
1. Develop a risk matrix to identify the major internal and external risks that could potentially threaten the business. Provide a score to each risk for the following variables: a) likelihood of occurrence (i.e. certain, likely, possible, unlikely, rare), the enterprise's level of exposure to them (i.e. extreme, high, moderate, low), and the degree of possible negative impact to the enterprise in case of occurrence (i.e. tragic, critical, marginal, negligible). 2. Review your business records and the decisions taken by the different departments (i.e. production, commercial, financial, human resources, governance body) to check for actions and mechanisms that have been implemented against the internal and external risks that could potentially threaten the business. 3. List and prioritize the actions and mechanisms that you have implemented based on the likelihood of occurrence of the risks they are referred to, the level of exposure of the enterprise to them, and the degree of possible negative impact to the enterprise.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled):		

- A set of actions and mechanisms has been implemented to adapt to and/or to reduce the possible negative impact of all internal and external risks that could potentially threaten the enterprise' business.
- Since the implementation of these actions and mechanisms there are records that present how the enterprise has reduced the likelihood of occurrence of certain risks, the level of exposure to them and their potential negative impact.

Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score):

- The enterprise has not evaluated which internal and external risks could potentially threaten its business.
- The enterprise has not implemented any action and mechanism to adapt to and/ or to reduce the possible negative impact of any internal or external risk that could potentially threaten the enterprise' business.

6. Limitations of the Core Indicator

This indicator does not measure the quality, effectiveness or pertinence of the actions and mechanism implemented in terms of preventing, managing and reducing the negative impact of the risks the enterprise could face.

7. Sources of information

- Examples of risk matrix can be found in the following sites:
<http://www.mitre.org/work/sepo/toolkits/risk/ToolsTechniques/RiskMatrix.html>.
<http://worldbank.mrooms.net/course/view.php?id=428>
<http://www.joe.org/joe/2006april/tt1.php>
- Risk Management Guide for Agriculture from The Inter-American Institute for Cooperation on Agriculture (IICA), available in Spanish at:
<http://www.iica.int/Esp/Programas/agronegocios/Publicaciones%20de%20Comercio%20Agronegocios%20e%20Inocuidad/B3061e.pdf>

Core Indicator name		
Guarantee of production levels (C 2.5.1)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Stability of Production (C 2.5)
1. Description		
Guarantee of production levels refers to the mechanisms that the enterprise has put in place to ensure that the quantity and quality of the production is sufficiently resilient to withstand environmental, social and economic shocks. They are mechanisms that could reduce the risks that might threaten the enterprise' production process and could prevent meeting business commitments and quality standards. As part of a risk management strategy, the enterprise needs to reduce as possible the negative impact of having production shortages due to economic, social and environmental shocks, and to ensure that volume and quality of the production are met. For instance, when applicable, the access to warehouses to store overproduction in relative good conditions could benefit the enterprise in these emerging situations.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to primary production and processing levels.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has access to and implements mechanisms to prevent any disruption of the volume of production and/or quality standards.		
4. How to Measure		
1. Review your business records and the decisions taken by the governance body and/or the production department to check whether the enterprise has defined and implemented mechanisms to prevent any disruption of the volume of production and quality standards in the event of facing potential shocks. 2. List the mechanisms implemented addressed at: a) Preventing any disruption of the volume of production b) Preventing any disruption of quality standards		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise has a plan to guarantee the required volume of production and the compliance with quality standards in the event of facing social, environmental and economic shock • The enterprise has implemented all mechanisms included in the plan in order to achieve its objectives. Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score): • The enterprise has not developed any plans nor has identified any mechanism to guarantee the required volume of production and the compliance with quality standards in the event		

of facing social, environmental and economic shocks. • The enterprise has not advanced in implementing any mechanism to guarantee production and quality levels.
6. Limitations of the Core Indicator
This indicator does not measure the quality, effectiveness and pertinence of the mechanisms implemented in terms of their objectives.
7. Sources of information
• Climate Change and Agriculture: Impacts, Adaptation, Mitigation and Options for the OECD from OECD: http://olisweb.oecd.org • Managing Risk in Agriculture, A holistic Approach from the OECD: http://www.oecd-ilibrary.org/agriculture-and-food/managing-risk-in-agriculture_9789264075313-en

Core Indicator name		
Product diversification (C 2.5.2)		
Dimension Economic	Theme Vulnerability (C 2)	Sub-theme Stability of Production (C 2.5)
1. Description		
Product diversification refers to the process through which the enterprise diversifies or expands beyond its product range by modifying existing products or adding new products. It is a business strategy that could provide sales opportunities and growth to the enterprise through additional market potential. It aims to increase sales volume from new products and new markets. It also includes brand extension or the creation of new brands for existing products. Product diversification also serves to manage the risks (i.e. market, weather, price) the enterprise faces by spreading it across multiple products and markets.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain. Product diversification is a strategy that benefits any type and size of enterprises. For smallholder farmers for instance, it enables a better use of land through crop rotation, and the production of several crops and species simultaneously. It could have a direct impact minimizing soil erosion and increasing its fertility, as well as providing other environmental services, such as natural pest and weed control. Furthermore, it gives the enterprise the possibility to generate income all year round, reducing the dependency to seasonal crops, and minimizing the risk of mono-cultivation. For larger enterprises, product diversification offers also additional revenue sources and spreads the risks across multiple products and markets. For all the cases, it might require new skills and technology for developing and producing the new product, as well as additional resources for market research and market development.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise produces more than one product, good, specie or variety of plant or animal for income generation, or offers more than one service.		
4. How to Measure		
1. Review your business records from the production department and check for the number and type of products, goods, species or variety of plant or animal that the enterprise currently produces for income generation. 2. Review your business records from the strategy & management, production, or research and development department, and check if the enterprise is working towards producing new products, goods, species or variety of plant or animal for income generation.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise currently produces a wide variety of products, goods, species or varieties of plant or animal for income generation. Or, the enterprise offers a wide variety of services to the industry. • The enterprise has conducted a risk analysis to determine its level of vulnerability versus the type and number of products, goods, species, and varieties of plant or animal it currently produces for income generation. Or, the enterprise has conducted a risk analysis to determine its level of vulnerability versus the type and number of services it offers. • The result of the risk analysis does not recommend as a priority a greater product		

diversification.

Unacceptable practices (all the conditions automatically lead to a “Red” SAFA score):

- The enterprise currently produces only one product, good, specie or variety of plant or animal for income generation.
- There are records that reveal that the enterprise has an unfavorable level of vulnerability due to its mono-production.
- The enterprise has not progressed in implementing any step towards product diversification.

6. Limitations of the Core Indicator

Product diversification does not necessarily guarantee the stability of production. In addition, product diversification can be associated with more risk and requires a careful research, analysis and the appropriate business decision. There can also be large costs associated with it, for instance: the cost of conducting the market research to identify the opportunity and potential for the enterprise, the cost of entry in the market with the new product or the cost associated to ensure the competitive advantage of the product.

7. Sources of information

- Enhancing crop-livestock systems in conservation agriculture for sustainable product intensification: A Farmer Discovery Process Going to Scale in Burkina Faso, from FAO: <http://www.fao.org/docrep/012/i1437e/i1437e.pdf>
- Strategies for Diversification, in Harvard Business Review: http://foswiki.org/pub/Sandbox/SimiWiki/Strategies_for_diversification.pdf

Core Indicator name Control measures (C 3.1.1)		
Dimension Economic	Theme Product Quality and Information (C 3)	Sub-theme Food Safety (C 3.1)
1. Description		
“Control measures” refers to the actions that the enterprise can take to reduce the potential of exposure to food hazards, or to reduce the likelihood of the risk of exposure to the hazards being realized. Control measures might include the following tasks: conduct a risk analysis to identify all possible hazards; identify any steps in the production process that are critical to the safety of food; implement effective procedures to ensure as appropriate food safety by eliminating or isolating hazards, conduct a monitoring and evaluation of these procedures to ensure their effectiveness to avoid any food contamination. Food contamination should be avoided. Implementing control measures enables the enterprise to prevent and combat any situation that might lead to food contamination. Food safety has a direct impact on consumers’ health as well as on the employees that are in direct contact with the food ingredients. An integrated approach to ensure food safety requires a strong cooperation by the food industry and chain stakeholders in order to build consumers trust and confidence. The enterprise requires investing in education programs, preventive measures and the adoption of adequate practices. A food safety hazard is a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect. Some examples are: improper use of agricultural chemicals (i.e. pesticides, fungicides, herbicides, fertilizers), metal and rock fragments, the appearance of virus, bacteria and parasites and the use of some genetic modified organisms that have been proven to be harmful.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has food hazards and safety control measures in place that comply with correspondent regulations.		
4. How to Measure		
1. Review the policies and practices that have been implemented in terms of food quality and safety control in the production and processing department. 2. Check whether there are mechanisms in effective operation to prevent and control food hazards and food contamination. 3. When applicable, check whether the measures in place are updated and comply with correspondent regulations referred to food safety.		
5. Rating		

Dark Green: SAFA score is reached if (all conditions must be fulfilled):

- There are mechanisms in effective operation that fully comply with correspondent regulations to prevent and control food hazards and food contamination.
- There are no records of food contamination incidents since the mechanisms are in place.

Unacceptable practices (any of the conditions can automatically lead to a **“Red”** SAFA score):

- There are no mechanisms in place to prevent and control neither food hazards nor food contamination
- There are records of food contamination incidents in the last five years.

6. Limitations of the Core Indicator

This indicator does not measure directly the effectiveness of the mechanisms implemented. It does not determine what are the correspondent food safety regulations that the actions and mechanisms need to comply with, as it is context specific.

7. Sources of information

- The portal of the World Health Organization (WHO) includes a section for food security with related cases studies and publications, at: <http://www.who.int/foodsafety/en/>
- Guide to Food Safety, from the Canadian Food Inspection Agency, at: <http://www.inspection.gc.ca/food/non-federally-registered/safe-food-production/guide/eng/1352824546303/1352824822033>
- Codex Alimentarius, International Food Standards, from the World Health Organization (WHO), at: <http://www.codexalimentarius.org/>
- Food Safety at Farmers Markets and Agritourism Venues, from the University of California Davis at: <http://sfp.ucdavis.edu/files/144702.pdf>.
- Strategies for Improved Food Safety in Southeast Asia, from the GIZ at: <http://www.giz.de/Themen/en/dokumente/giz2013-documentation-food-safety-Workshop-sea.pdf>

Core Indicator name		
Hazardous pesticides (C 3.1.2)		
Dimension Economic	Theme Product Quality and Information (C 3)	Sub-theme Food Safety (C 3.1)
1. Description		
A pesticide is a chemical substance or biological agent used to prevent, destroy, attract, repel, mitigate or control any pest, such as insects, plants pathogens, weeds, fungi or other microorganisms as bacteria and viruses. They are commonly used during the production, storage, transport, distribution and processing of food, plants, crops, agriculture commodities, or animal feeds that might be administered for the control of ectoparasites. They can be classified by target organism, for instance: herbicides, bactericides, fungicides, insecticides or virucides. A considerable proportion of the pesticides currently used can be considered as highly hazardous, because they are highly toxic, there are records of chronic toxic effects in human beings, even at low exposure levels, and they remain in the environment or in organisms causing negative effects to the ecosystem. The World Health Organization publishes the most up-to date list of pesticides currently considered highly hazardous. They can cause health problems and fatalities as a result of occupational exposure and accidental or intentional poisonings. Environmental contamination could also result in human exposure through the consumption of residues of pesticides in food or drinking water. Biodiversity can also be highly damaged through the reduction of the number of species and the degradation of natural resources (i.e. soil, water, air, land). The enterprise is responsible of ensuring a healthy and safety environment for the employees, as well as preventing any health and environmental damage in the society. There are alternatives to the use of highly hazardous pesticides, such as organic and natural pest control, or ecological pest management systems. Most natural pesticides are derived from plants; they are less toxic and could be also effective. The use of organic and natural pest control aims to prevent that pests damage the crops or plants through control of natural enemies (biological control), or their damage is kept to a minimum levels. Approved organic pesticides could also be applied. Other mechanisms referred as cultural control are also used such as: crop rotation, sanitation, cover crops, resistant varieties, appropriate planting dates and plant spacing. Technical and mechanical controls could be also effective, for example, temperature, humidity or light to suppress pest population and damage.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to primary production and processing levels. Highly hazardous pesticides could have potentially dangerous impact on human health, life and the environment. They should be avoided in all the stages of the production, processing storage, transport and distribution of the enterprise' products, goods, species of plants or animals.		
3. Unit of Measurement or Metric		
This indicator measures whether any of the enterprise' employees has handled, stored or used any highly hazardous pesticides during the last five years.		
4. How to Measure		
1. Review your business records from the production, processing, quality control and distribution department and check for the pesticides that have been used in the last five years. 2. Compare the list of pesticides that the enterprise has used with the most-up-to date list of highly hazardous pesticides published by the World Health Organization. 3. Identify whether highly hazardous have been applied at any stage of the food chain during		

the last five years.
5. Rating
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise has a policy that prohibits the use of highly hazardous pesticides in all the stages of the food chain. The policy is also extended to the suppliers, when applicable. • There are no records of use of highly hazardous pesticides by any employee during the last five years across all the stages of the food chain. • The enterprise has incorporated and used organic and natural pest control when is most appropriate. • The enterprise requires the suppliers not to use any highly hazardous pesticides for the production, storage and distribution of the inputs, ingredients or products sold to the enterprise. Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score): • There are records that the enterprise has used highly hazardous pesticides during the last five years. • There are records of contamination and toxic effects to human health and the environment during the last five year attributed to the enterprise. • The enterprise is not aware or informed about the list of highly hazardous pesticides to be avoided. • The enterprise has not implemented any step towards reducing or prohibiting the use of highly hazardous pesticides in all the stages of the food chain.
6. Limitations of the Core Indicator
This indicator could present some difficulties to measure it, as it covers many stages of primary production and processing levels: from inputs, land cultivation, to product processing and transformation, storage, transport, among others. The control and monitoring of suppliers practices could also be limited. Access to information related highly hazardous pesticides in some context and countries might be also restrictive.
7. Sources of information
2. World Health Organization for most up to date list on pesticides currently considered highly hazardous: http://www.who.int/ipcs/publications/pesticides_hazard_2009.pdf 3. The Portal of FAO for Highly Hazardous Pesticides provides a wide range or resources, links and publications: http://www.fao.org/agriculture/crops/core-themes/theme/pests/code/hhp/en/ 4. The Portal of the World Health Organization (WHO) for Highly Hazardous Pesticides provides a wide range or resources, links and publications: http://www.who.int/ipcs/assessment/public_health/pesticides/en/index.html 5. The portal of the National Sustainable Agriculture Information Services provides access to organic and natural control of pest: https://attra.ncat.org/pest.html 6. The portal of the International Federation of Organic Agriculture Movements (IFOAM) includes several resources for organic pest, disease and weed management: http://classic.ifoam.org/growing_organic/7_training/t_materials/1_soil_plant/soil_plant_pest_diseases_weeds.html

Core Indicator name		
Food contamination incidents (C 3.1.3)		
Dimension Economic	Theme Product Quality and Information (C 3)	Sub-theme Food Safety (C 3.1)
1. Description		
Food contamination incidents” refers to the cases in which adulteration of food has been reported due to negligence, accident, or involuntary misconduct of the enterprise. In these cases, food products that have been distributed and consumed are spoiled or infected because they either contain microorganisms, such as bacteria or parasites, or toxic substances that make them unsuitable for consumption. Different type of elements can cause food contamination, for instance: agrochemicals (i.e. pesticides, synthetic fertilizers), environmental contaminants (i.e. arsenic, mercury, copper, mycotoxins), processing contaminants (i.e. histamine, benzene), biological organisms (i.e. salmonella) and unapproved Genetic Modified Organisms (GMOs), among others. The careful management of food production, processing and the avoidance of these substances is essential to prevent contamination. The occurrence of food contamination could have severe negative impacts on consumers’ health. Recurrent incidents of food contamination caused by the enterprise’ products and goods could also affect buyers’ and consumers’ confidence and influence their buying decision. This behaviour could directly undermine the enterprise’ image, market position and sales records. There are health and safety regulations that recommend and enforce to adopt adequate practices to prevent and control the occurrence of food contamination. The enterprise should be informed and apply them as corresponds. To conduct a cost-effective monitoring and surveillance of food security, a coordinated multi-stakeholder approach is required along the food chain. Keeping food safe as it moves in the supply chain is a significant challenge, especially in the context of global networks. Information and traceability systems allow continuously collecting and analyzing relevant information for tracking, monitoring and recall the product to improve food protection and consumer safety. Similarly, strengthening the epidemiological and microbiological expertise across the food chain could facilitate the direct monitoring of the product and the problem solving.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all levels of the food chain, though has particular relevance to primary production and processing operations.		
3. Unit of Measurement or Metric		
This indicator measures whether there are any documented incidents at the enterprise where pesticides residues in ingredients or products have exceed the maximum allowed limits during the last 5 years. It also measures whether there are any documented incidents of chemical and biological food contamination (i.e. due to the use of heavy metals, unapproved GMOs, mycotoxins) during the last five years.		
4. How to Measure		
1. Review your business records from the production, processing and quality control department of the last five years, and check for any reported incident resulting from the exceed of pesticides residues in ingredients or products, or from any chemical or biological food contamination. 2. Review your business records and check if there is any reported incident of food contamination from final consumers of the products sold during the last five years. 3. Review your business records and check if the enterprise has any food safety policy to		

prevent food contamination and has adopted correspondent practices.
5. Rating
Dark Green SAFA score is reached if (all conditions must be fulfilled): • There are no records of food contamination incidents resulting from the enterprise' products during the last five years. • The enterprise has adopted best practices to prevent and control food contamination based on the correspondent health and safety regulations. • Complete product information (i.e. ingredients, processing inputs) is available at the enterprise level and across the supply chain due to tracking and traceability systems. • The correspondent employees are informed and trained and have access to the equipment required to ensure food safety and to prevent any contamination incidents. Unacceptable practices (any of the conditions can automatically lead to a "Red" SAFA score): • There are records of food contamination resulting from the enterprise's products in the last five years. • An increasing trend of number of food contamination incidents is reported during the period. • The enterprise has not implemented any step towards preventing food contamination incidents. • The enterprise has not established the adequate health and safety conditions to ensure food safety.
6. Limitations of the Core Indicator
Food contamination incidents are an important reference to assess food safety. However, there are other aspects that would need to be considered for a more comprehensive assessment to ensure food safety measures and controls, such as the design and construction of premises (i.e. buildings, facilities, food contact surfaces), control of operations (i.e. transportation, receiving, shipping, storage and handling, temperature control, equipment, personal health and hygiene, complaint handling) and other applicable preventive food safety and control systems.
7. Sources of information
• Manual on the Application of the HACCP System in Mycotoxin. Prevention and Control, from FAO: http://www.fao.org/docrep/005/y1390e/y1390e00.htm • The FAO portal for pest and pesticide management offers a wide range of resources, links and publications in this regard: http://www.fao.org/agriculture/crops/core-themes/theme/pests/en/ • Guide to good farming practices for animal production for food safety, from the World Organization for Animal Health (OIE): http://www.oie.int/fileadmin/Home/eng/Current_Scientific_Issues/docs/pdf/eng_guide.pdf. • Food Quality and Standards Service (AGNS), from FAO: http://www.fao.org/ag/agn/agns/ • Codex Alimentarius (AGNC, joint FAO/WHO Food Standards): http://www.codexalimentarius.net/web/index_en.jsp

Core Indicator name Quality standards (C 3.2.1)		
Dimension Economic	Theme Product Quality and Information (C3)	Sub-theme Food Quality (C 3.2)
1. Description		
“Quality standards” refers to the set of rules defined to guarantee food quality and to meet the highest nutritional standards respective to the type of product. Food standards are a body of rules or legislation defining certain criteria, such as composition, appearance, freshness, source, sanitation, purity, which food must fulfill to be suitable for distribution or sale. The enterprise implements quality control measures to ensure that the expected level of quality of the product and nutritional standards are met. Product quality is an important component to leverage the enterprise’ market positioning and growth. Its competitive advantage lays predominately in two main factors: quality of the product and its price. Achieving high quality levels and the highest nutritional standards might benefit considerably the enterprise’ business growth. Even though each product might require to meet specific nutritional standards, there are some that might be recommended across the food chain, for instance: level of calories based on the ranges defined by the Dietary Reference Intakes (DRIs), low content of saturated and trans fat, no added sugar, low content of additives, rich in fiber, minerals, vitamins and proteins. The national departments or ministries of health, education or agriculture tend to define and recommend specific nutritional standards for each product that the enterprise should know to ensure its compliance.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures the share of the total volume of production that meets the highest nutritional standards.		
4. How to Measure		
1. Review the quality control report referred to the total volume of production for a given period. 2. Check whether the quality control report observes the required and highest nutritional standards and other quality norms that the product needs to meet. 3. Calculate the share of the volume of production that has successfully passed the quality control.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise has advanced in adopting the best practices to produce food products that meet the highest nutritional standards considered for its target population, such as for instance: the level of calories based on the ranges defined by the Dietary Reference Intakes		

(DRIs), there is a low content of saturated and trans fat, no added sugar, low content of additives, the product is rich in fiber, and certain minerals, vitamins and proteins.

- The respective staff is informed and trained in adopting the best practices to meet the expected food quality levels and the highest nutritional standards.
- 100% of the volume of production has successfully passed the quality control that measures the required and highest nutritional standards the product needs to meet.

Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score):

- Any amount of the production has not passed the quality control that measures the required nutritional standards the product needs to meet.
- The enterprise is not aware of the highest nutritional standards and other food quality norms the product needs to meet.
- The enterprise has not implemented any step towards adopting best practices to produce food products that meet the highest nutritional standards and food quality levels.

6. Limitations of the Core Indicator

This indicator does not determine what are the highest nutritional standards applicable to the respective product, as it is subject to each case, target population, national and international regulations. However, it suggests some minimum guidelines.

7. Sources of information

- The FAO portal for Good Agricultural Practices provides access to main food safety, quality and related international standards: http://www.fao.org/prods/gap/links/links_4_en.htm
- The FAO portal for Food Safety and Quality provides access to relevant publications and tools in this regards: <http://www.fao.org/food/food-safety-quality/a-z-index/en/>
- Nutritional requirements (for adults), from the World Food Program: <http://www.wfp.org/fais/sites/default/files/Requirements.pdf>
- Food quality and safety standards, a practitioners reference book from the GIZ: http://www.value-chains.org/dyn/valuechains/bdssearch.details?p_phase_id=608&p_lang=en&p_phase_type_id=6
- Inventory of Food Standards from the GIZ: http://www.value-chains.org/dyn/valuechains/bdssearch.details?p_phase_id=608&p_lang=en&p_phase_type_id=6

Core Indicator name Product labeling (C 3.3.1)		
Dimension Governance	Theme Product Quality and Information (C 3)	Sub-theme Product Information (C 3.3)
1. Description		
Product labeling is an essential part of transparent accountability to consumers. According to the Codex Alimentarius Commission (CODEX STAN 1-1985), “Labeling means any written, printed or graphic matter that is present on the label, accompanies the food, or is displayed near the food, including that for the purpose of promoting its sale or disposal.” Information usually provides details on the content and composition of products but also particular aspect of the product, such as its origin, it’s production method including whether it has been produced using a certified organic production method. Some foodstuffs, such as those containing genetically modified organisms or allergenic substances, especially foods intended for infants or even various beverages, are subject to specific regulations. Labeling may also identify value based systems such as whether goods have been produced using a certified fair trade system. Labeling of certain non-food products must also contain particular information such as toxicity, hazard, and flammability, in order to guarantee their safe use and allow consumers to exercise real choice. In addition, the packaging of foodstuffs must adhere to production criteria in order to avoid contaminating food products with both food and non-food contaminants. Labeling must be genuine and in the best systems this is independently verified such as an organic certification or fair trade certificate. Thus, the labeling and claims vary from, ethical nutritional, through safety and production process characteristics and can include the mundane such as origin through to whether the food is the result of GE or biotechnology. The standard is the label must be clear, honest and verifiable.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
For all but the smallest and informal organizations this indicator will apply. Even in the informal economy claims are made for food produced. For example at a roadside market in coastal Lae PNG a village woman sells not only her own produce but cabbages grown in the mountainous Chimbu province with a handwritten sign on used cardboard identifying “Kundiawa cabbage”.		
3. Unit of Measurement or Metric		
- For mandatory labeling as required in the country of sale 100% of compliance is expected. However where an enterprise markets to numerous jurisdictions the highest standard required by any jurisdiction should be applied to all. - Where an enterprise has adopted labeling and information beyond the minimum standard this should be noted and again 100% compliance is expected anything less is worse than not labeling at all.		
4. How to Measure		
- All product labeling is audited against legally required code in the country in which it is sold. - All voluntary claims such as fair trade or organic are checked against the independent		

certifier statement. • Where content and nutritional claims are made these are routinely independently audited. • Labeling codes used are included in the enterprise quality management documentation. Any variance from the code is documented and reported internally.
5. Rating “Dark Green” score: The enterprise fully complies with all relevant legally required labeling codes for its products. It seeks to go beyond minimum standards in providing consumer information, is responsive to its stakeholders and has an accessible system whereby consumers and other stakeholders can obtain further product and product quality and safety information. Unacceptable practices (automatically lead to a “Red” SAFA score): • The enterprise has not complied with labeling codes and has sought to avoid the impact of these codes. • Products are knowingly or regularly incorrectly labeled.
6. Limitations of the Core Indicator The indicator relies on regulated labeling codes. In some jurisdictions these may not exist. Moreover, some of the important information is not present in the breach for instance while some suppliers strive for fair trade status, no producer labels “not fair trade”.
7. Sources of information • http://europa.eu/legislation_summaries/consumers/product_labelling_and_packaging/EU legislation on product labeling and packaging: http://europa.eu/legislation_summaries/consumers/product_labelling_and_packaging/

Core Indicator name		
Traceability system (C 3.3.2)		
Dimension Governance	Theme Product Quality and Information (C 3)	Sub-theme Product Information (C 3.3.)
1. Description		
Systems and procedures ensure traceability over all stages of the food chain so that products can be easily and correctly identified and recalled.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all levels of the food chain. It is a relevant indicator as it measures the degree of product transparency from the production stage to the consumer.		
3. Unit of Measurement or Metric		
This indicator measures the share of the volume of production that has a traceability system in place to identify and recall the product in the next stage of the food chain and in the marketplace.		
4. How to Measure		
- Review your business records regarding the volume of production for a given period and the way the product is identified when advancing to the next stage of the food chain or to the marketplace. - Check for any record on the product that will allow following its movement through the different stages of the production, processing and distribution, and to recall it when required. - Calculate the share of the volume of production that can be followed and recalled through the different stages of the food chain and the marketplace. - Guidance notes: clarify the definition of traceability: “the ability to follow the movement of a food through specified stage(s) of production, processing and distribution” (Source: The Codex Alimentarius Commission)		
5. Rating		
“Dark Green” score: 100% of the total volume of production for a given period has a traceability system in place. Unacceptable practices (automatically lead to a “Red” SAFA score): 0% of the total volume of production for a given period has a traceability system in place.		
6. Limitations of the Core Indicator		
This indicator does not measure the effectiveness of the traceability system to identify and recall the product through the food chain and at the marketplace.		
7. Sources of information		
The Codex Alimentarius Commission: http://www.codexalimentarius.org/		

Core Indicator name Certified production (C 3.3.3)		
Dimension Governance	Theme Product Quality and Information (C 3)	Sub-theme Certified Production (C 3.3)
1. Description		
Certified sustainable production enables an enterprise to assure its customers of the suitability of the entire supply chain. It is a growing field and is gaining credibility as very large and powerful organizations are subscribing to it and investing in ensuring sustainable production. Increasingly consumers are demanding certification and becoming wary of self-certification schemes where a producer or marketer creates non independent “certification” by awarding itself a brand which mimics independent certification. By contrast certified sustainable production employs independent or collaborative replicable verification with transparent auditable protocols. Certification might include organic standards including those certified under Participatory Guarantee systems, HAACCP food safety systems, Fair trade or Sustainable Forest Certification. Certifications which are closely associated with large producers and marketers are the subject of some controversy, as to whose interests are given primacy in their deliberations.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
It seems likely with the rapid growth of demand for certification that this will become the norm in much of the supply chain. Care will need to be exercised to ensure certification is accessible and relevant to small producers and those in remote communities. Previous certification systems such as Fair Trade and Organic standards have not always been available or affordable to small producers in remote areas. This creates the risk that the very standards and certifications being employed to improve the livelihoods of these farmers are actually excluding the same farmers from premium markets thus making their position relatively worse. New collaborative systems such as Participatory Guarantee Systems are overcoming some of these concerns. Agriculture is a very demand driven system. As demand grows, food flows. Some enterprises will be formed in imperfect markets where the creation of demand will be required to encourage sustainable production. For example an entrepreneur wants to start an urban organic locally sourced food distribution business. Initially she may have to compromise by sourcing some produce from outside the district or from uncertified suppliers. As the market for her business grows she may be able to encourage more local certified production because she has established viable market.		
3. Unit of Measurement or Metric		
- This metric is more important internally than externally as it will be of most use in measuring progress towards a fully certified procurement system. - The % of certified sustainable procurement will be the primary measure.		
4. How to Measure		
Using procurement records we need to establish: That all procurement is assessed as certified or not, and that this is regularly recorded.		

- An assessment is in place for any non-certified procurement which details the problem with the procurement, reason for the decision, plan to remedy and date for review.
- The organization has evidence that it transparently reports to its stakeholders on its progress towards certified sustainability procurement.

5. Rating

“Dark Green” score:

- The enterprise has a procurement record which identifies the certification status for all procurement.
- The enterprise is able to provide evidence of assessments for any non certifiable procurement and this assessment details the problem with the procurement, reason for the decision, plan to remedy and date for review.
- The enterprise has evidence that it transparently reports its progress towards certified procurement. To its stakeholders.

Unacceptable practices (automatically lead to a “Red” SAFA score):

- The enterprise has no records of certification of its procurement
- The records of certified procurement are not independently verified or are self awarded plan.
- The enterprise claims to stakeholders of certified supply cannot be proven.

6. Limitations of the Core Indicator

Small suppliers will have limited control or influence over certification bodies and may be unfairly excluded from certification due to scale or remoteness.

7. Sources of information

- Rainforest Alliance <http://www.rainforest-alliance.org/sourcing-assistance?gclid=CJu915b9ubcFCwgpQodQgUAMw>
- Whelan, T. 2013. *Seven innovations driving certified-sustainable markets of the future.* <http://www.greenbiz.com/blog/2013/05/22/innovations-certified-sustainable-markets-future>
- Sustainable sourcing of agricultural raw materials. A practitioner’s guide. <http://www.standardsmap.org/uploadedFiles/standardsmaporg/Sustainable%20Sourcing%20Guide%20-%20Final.pdf>
- SGS Chain-of-custody certification for forest products. http://www.sgs.com/en/pages/Agriculture-and-Food/FSC-Certification-Information-Request?wt.mc_id=gAGF13005a&WT.seg_1=fsc%20certified&WT.srch=1&gclid=CLXCm_PCxrcCFclYpQodpU4ADw

Core Indicator name Regional workforce (C 4.1.1)		
Dimension Economic	Theme Local Economy (C4)	Sub-theme Value Creation (C 4.1)
1. Description		
Regional workforce refers to the employees the enterprise hires that come from the community, municipality or region where operations are based. It distinguishes with those employees that come from other regions or countries not directly involved with the community and microenvironment where the enterprise operates. The contribution of the enterprise to the local economy through the employment of local professionals and technicians is a significant component of sustainable development, and might benefit the long-term business viability of the enterprise. Local employment and sustainable economic development are two interrelated variables. There are several principles that could frame the value creation of the enterprise to the local economy when hiring regional workforce: it creates an adaptable skilled labour force; it supports employment progression and skills upgrading, it contributes to develop local governance and to build local capacities, it invests in education and training of the selected employees, and it contributes to improve local employment rates through job creation.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain where there are employees.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has hired during the last 5 years regional employees when similar skills, profile and conditions are offered in relation to other candidates to perform adequately the required duties and responsibilities.		
4. How to Measure		
1. Review your business records of the last five years and check for the employees' profiles of those that were hired during the period 2. Identify their origin and review their personal history. 3. For the cases that non-regional employees were hired, check your business records and decisions taken to find out the reasons why another candidate was selected as the most appropriate to conduct the required duties and responsibilities.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise has a human resources policy that prioritizes hiring regional employees when similar skills, profile and conditions are offered in relation to other candidates. • The human resource department and/or the staff responsible of hiring new employees are informed and aware of such policy. • The enterprise has hired regional employees during the last 5 years in all the cases that		

similar skills, profile and conditions have been offered to perform adequately the required duties and responsibilities.

Unacceptable practices (any of the conditions can automatically lead to a “Red” SAFA score):

- The enterprise does not have a human resources policy that prioritizes hiring employees when similar skills, profile and conditions are offered in relation to other candidates.
- The enterprise has hired during the last 5 years in all applicable cases non-regional or external candidates when regional candidates offer similar skills, profile and conditions.

6. Limitations of the Core Indicator

This indicator does not measure the working conditions and benefits of the employees.

7. Sources of information

- Putting in Place Jobs that Last, A Guide to Rebuilding Quality Employment at Local Level from the OECD: <http://www.oecd.org/cfe/leed/44418145.pdf>
- LEED Program: Local Economic and Employment Development from the OECD: www.oecd.org/cfe/leed
- Investing in People: Sustaining Communities through Improved Business Practices, from the International Finance Corporation, Environmental Division: <http://www1.ifc.org/wps/wcm/connect/1dc2e10048865811b3fef36a6515bb18/CommunityGuide.pdf?MOD=AJPERES>

Core Indicator name		
Fiscal commitment (C 4.1.2)		
Dimension Economic	Theme Local Economy (C 4)	Sub-theme Value Creation (C 4.1)
1. Description		
Fiscal commitment refers to the enterprise disposition to make effective its responsibility and obligation as a tax contributor by paying the local* taxes for which is eligible. *Local being defined as belonging or relating to a particular area or neighborhood. In this case, it could be referred to municipal, regional and national regulations and taxes. The contribution of the enterprise to the local economy, by paying its correspondent taxes at the appropriate time, is a significant component of sustainable development. In both developed and developing countries, enterprises and individuals contribute to local and national public budgets through the payment of taxes and fees. This income is a major source of revenue for the government used to invest in improving and offering public services, such as infrastructure, security, transportation, electricity, health care, education or environmental protection. In addition to its direct activities and beneficiaries, the enterprise generates value in the local economy through its fiscal commitment and effective accomplishment. The enterprise can also increase its transparency through public reporting of its financial data and tax payments.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise pays the taxes as indicated by local regulations that are applicable to its business in all countries of its operation.		
4. How to Measure		
1. Review your business records for a given period and check for the tax reports, which indicate the taxes that the enterprise has paid. 2. Review the fiscal local regulations that apply to your enterprise in each of the countries of its operations. 3. Check whether the enterprise has paid the applicable taxes for the given period.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise has paid all the local taxes that are applicable and due in all countries of operation. Unacceptable practices (automatically lead to a “Red” SAFA score): • The enterprise has not paid any local taxes that are applicable and due in all countries of operation.		
6. Limitations of the Core Indicator		

This indicator does not determine what are the fiscal local regulations applicable to the enterprise, as it is context specific.

7. Sources of information

- Why tax matters for development, an article available at the Observer portal from the OECD: <http://www.oecdobserver.org/news/fullstory.php/aid/2943/>
- The OECD recently set up a Task Force on Tax and Development, materials and publications are available: <http://www.oecd.org/ctp/tax-global/taxanddevelopment.htm>
- Tax for Development from NORAD: http://www.norad.no/en/tools-and-publications/publications/norad-reports/publication/_attachment/396279?_download=true&_ts=13a8cde94d1
- A Case Study: Tax Revenue and Economic Development in Nigeria: A Macroeconometric approach, at the Academic Journal of Interdisciplinary Studies: http://www.mcser.org/images/stories/AJIS-Journal/AJIS-Journal-Vol2-Nov2012/AJIS%20Journal_211%20Worlu.pdf

Core Indicator name Local procurement (C 4.2.1)		
Dimension Economic	Theme Local Economy (C 4)	Sub-theme Local Procurement (C 4.2)
1. Description		
“Local procurement” refers to the commitment and effective accomplishment of the enterprise to benefit local economies through procurement from local suppliers. Definition of local: belonging or relating to a particular area or neighbourhood, in this case it could be referred to the municipality and region, and to a lesser extent, to the country where the enterprise operates. Procurement from local suppliers contributes to make the economy more dynamic. Supply chain stakeholders grow and could generate value through employment, investment in the community and skills development. Instead of buying its inputs supplies from overseas, the enterprise could establish business relationships with local suppliers and integrating them in the supply chain. By doing so, the enterprise could have significant benefits also, such as influencing the quality of the inputs, supporting the productivity and cost efficiency of its suppliers through the provision of training, technology or financial resources, and the possibility to have regular and personal communication for mutual benefit.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator applies to all types and sizes of operations, at all levels of the food chain.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has purchased its inputs/ingredients/products from local suppliers when equal or similar conditions exist in comparison to non-local suppliers.		
4. How to Measure		
1. Review your business records regarding the purchase made by the enterprise for a given period. 2. Check the origin of all the suppliers that have sold to the enterprise inputs and supplies. 3. For the cases that non-local suppliers have provided inputs to the enterprise, review whether there are alternative local suppliers that could procure the required inputs under equal or similar conditions.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • The enterprise has developed and applied a procurement policy that prioritizes the purchase of inputs, products and ingredients from local suppliers. • In 100% of the cases where local suppliers can provide the required inputs to the enterprise, under equal or similar conditions in comparison to non-local, the enterprise has selected local suppliers. Unacceptable practices (automatically lead to a “Red” SAFA score): • In most cases where local suppliers can provide the required inputs to the enterprise, under		

equal of similar conditions in comparison to non-local, the enterprise has selected non-local suppliers.
6. Limitations of the Core Indicator
This indicator does not specify what are the equal or similar conditions to be used by enterprises to judge the value in local procurement versus non-local procurement in terms of for instance, quality and price, as it is subject to each case.
7. Sources of information
- A Guide to Getting Started in Local Procurement. For companies seeking the benefits of linkages with local SMEs from the International Finance Corporation (The World Bank Group): http://commdev.org/guide-getting-started-local-procurement-companies-seeking-benefits-linkages-local-smes-download - Procurement for Local Development, A Guide to Best Practice in Local Government Procurement in Least Developed Countries from United Nations Capital Development Fund (UNCDF): www.uncdf.org/sites/default/files/Download/procurement.pdf

SAFA SOCIAL CORE INDICATORS – OVERVIEW AND FULL EXPLANATIONS

Dimension S: SOCIAL WELL-BEING		
Themes	Sub-themes	Core Indicators
S1 Decent Livelihood	S 1.1 Right to Quality of Life	S 1.1.1 Right to quality of life
	S 1.2 Capacity Building	S 1.2.1 Capacity building
	S 1.3 Rights of Fair Access to Land and Means of Production	S 1.3.1 Rights to fair access to land and means of production
S2 Fair Trading Practices	S 2.1 Responsible Buyers	S 2.1.1 Suppliers' freedom of association and right to collective bargaining
		S 2.1.2 Fair pricing and negotiated contracts or agreements
S3 Labour Rights	S 3.1 Employment Relations	S 3.1.1 Employment relations
	S 3.2 Forced Labour	S 3.2.1 Forced labour
	S 3.3 Child Labour	S 3.3.1 Child labour
	S 3.4 Employees' Freedom of Association and Right to Bargaining	S 3.4.1 Employees' freedom of association and right to bargaining
S4 Equity	S 4.1 Non-discrimination	S 4.1.1 Non-discrimination
	S 4.2 Gender Equality	S 4.2.1 Gender equality
	S 4.3 Support to Vulnerable People	S 4.3.1 Support to vulnerable people
S5 Human Health and Safety	S 5. 1 Workplace Safety and Health Provisions for Employees	S 5.1.1 Workplace safety and health provisions for employees
	S 5.2 Public Health	S 5.2.1 Public health
S6 Cultural Development	S 6.1 Indigenous Knowledge	S 6.1.1 Indigenous knowledge
	S 6.2 Food Sovereignty	S 6.2.1 Food sovereignty

Core Indicator name		
Right to quality of life (S 1.1.1)		
Dimension Social	Theme Decent Livelihood (S 1)	Sub-theme Right to Quality of Life (S 1.1)
1. Description		
Primary producers, smallholders and employees in enterprises of all scales have the right to a quality of life that affords adequate food, shelter, clothing, health, employment, hours of work that are limited to allow time to spend with family and for recreation, adequate rest from work, overtime that is voluntary, and educational opportunity for themselves and their immediate families. They are able to practice self-sufficiency and maintain a home garden or have access to a community garden. Smallholders are able produce agricultural products for market without financial pressures that force them to use all of their land and production outputs for sales or export markets in order to garner an adequate income. Quality of life also implies the absence of significant adverse pressures from political oppression, turmoil and wars outside the immediate family (community/environment) and, ideally, substantial positive influences that promote mental health, feelings of security and peace. Quality of life furthermore implies the flourishing of culture, the collective way of life built over generations by an identified group or society. Defining features of a culture include one or more of the following: language, food, clothing, religion, philosophy, arts, music, architecture, agriculture, business structures, governance structures, celebrations, rituals, and other social interactions and customs.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
These rights should apply to enterprises of all sizes, as well as all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations and should include both full and part-time producers and be reflective of all farming partners involved in the day-to-management of the operation, as well as all people employed whether full or part time, year round or seasonal.		
3. Unit of Measurement or Metric		
This qualitative indicator measures whether primary producers/employees (i) receive living wages from a limited number of hours a week from paid labour without compulsory overtime, speak the language of their choice and practice the religion or rituals that they prefer; (ii) enjoy a culturally appropriate diet; and (iii) have time to spend with family and neighbours.		
4. How to Measure		
- Interviews with primary producers and their families and with employees that show that they feel free to lead peaceful and productive lives, to devote a limited number of hours a week to paid labor without compulsory overtime, to speak the language of their choice and to practice the religion or rituals that they prefer. - Interviews that confirm that either through cash earnings, mutual aid, barter or sharing with neighbors, the community or tribal group, primary producers and employed workers enjoy a culturally appropriate diet, have time to spend with family and neighbors.		
5. Rating		
Dark Green SAFA score is reached if: Primary producers, workers and their families live free from oppression, in peace,		

security and mental and physical health.

- Primary producers, workers and their families live free from oppression, in peace, security and mental and physical health.
- Primary producers and employees earn living wages from a limited number of hours of paid labor.
- Primary producers and employees can speak the language of their choice and practice the religion or rituals that they prefer;
- Primary producers and employees can enjoy a culturally appropriate diet;
- Primary producers and employees have time to spend with family and neighbours;
- The overtime of employed workers is voluntary and fully compensated.

Red: SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met):

- Poverty prevents primary producers or employed workers from enjoying a culturally appropriate diet, from living with adequate shelter, from living in security with time for family life and culture, free from anxiety, and the constant need for exhausting underpaid labor.
- Outside forces prevent primary producers or employed workers from speaking their native language, practicing their chosen rituals and religion, and accessing the kind of education they choose.
- Overtime is compulsory and not fully compensated.

6. Limitations of the Core Indicator

What constitutes a good quality of life is subjective and relative. It is not possible to quantify in one summary measurement. To measure quality of life, it is necessary for an investigator, who speaks the local language and who is familiar with local attitudes, customs and mores, to conduct individual interviews.

7. Sources of information

- Universal Declaration of Human Rights (articles 18, 19, 24, and 27) :
<http://www.un.org/en/documents/udhr/index.shtml>

Core Indicator name		
Capacity building (S 1.2.1)		
Dimension Social	Theme Decent Livelihood (S 1)	Sub-theme Capacity Building (S 1.2)
1. Description		
For enterprises to be sustainable they must provide conditions for stable employment, internal advancement, capacity building and growth for employees. Employees who are learning and growing and feel that they have a promising career path are more likely to do their best work and contribute to the improvement of the enterprise. Similarly, primary producers have the right to adequate resources so that they can increase their own skills and knowledge, and assure the future of their enterprise by providing opportunities for learning and training for members of their family, community or tribe.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
These rights should be considered inclusive for all employees and for primary producers, in all types of ownership and production models. These rights should apply to all sizes of enterprise, as well as all types of ownership structures including cooperatives, single -family units, collectives, community-owned land trusts, tribal associations, and plantations. Opportunities for capacity building should include both full and part-time producers, men and women. Spouses and relatives living and/or working as producers with their own enterprises must be included along with indigenous peoples or tribal groups who hold land communally.		
3. Unit of Measurement or Metric		
This indicator measures whether employees have opportunities for capacity building, and advancement within the enterprise; and whether primary producers have adequate resources to build their own capacities and their family members in order to adopt improved techniques and provide for succession to the next generation.		
4. How to Measure		
1. Interview employees to find out if they have opportunities for capacity building, advancement within the enterprise where they are employed; 2. Interview primary producers to determine whether they and their family members have the possibility so that they can adopt improved techniques that make their enterprises more productive and efficient, more environmentally sound and innovative, and more profitable and the next generation is motivated and equipped to take over.		
5. Rating		
Dark Green SAFA score is reached if: • Primary producers have the possibility to receive training themselves to adopt and have adopted innovations that make their enterprises more sustainable and productive. • Primary producers provide training for the next generation to improve and take over their enterprise. • Employers provide all employees with opportunities for training and advancement within the enterprise. Red: SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met): 1. Employers hire from outside their enterprise when they want new skills or greater capacity		

and do not give their own workers the chance to advance. 2. Primary producers fail to adopt innovations and their children leave to seek opportunities elsewhere. 3. Training programs are only open to men or members of a particular ethnic, racial or economic group. 4. Employers discriminate against particular ethnic, gender or racial groupings when selecting candidates for training and advancement.
6. Limitations of the Core Indicator
Larger enterprises have more resources for training and internal advancement. A primary producer's enterprise may be limited to the producer's family and only one or two employees and those may be part time, thus there is no possibility of advancement within the company. Nevertheless, primary producers who are receiving adequate payments for their products should provide training for themselves, their family members and their employees so that their enterprise improves and has a future through succession to the next generation whether taken over by their own children or by others in the community.
7. Sources of information
• Universal Declaration of Human Rights (article 26): http://www.un.org/en/documents/udhr/index.shtml • ILO Declaration on Social Justice for a Fair Globalization: http://www.ilo.org/global/resources/WCMS_099766/lang--en/index.htm

Core Indicator name		
Rights of fair access to land and means of production (S 1.3.1)		
Dimension Social	Theme Decent Livelihood (S 1)	Sub-theme Rights of Fair Access to Land and Means of Production (S 1.3)
1. Description		
Primary producers' rights to access land either as private property at prices they can afford to pay out of production earnings, through inheritance, as hereditary tribal holdings, or as leaseholds that provide long-term, secure tenure, and to the means of production are basic producer freedoms that form the necessary basis and prerequisite conditions for fair trading that enable decent livelihood. Indigenous peoples have the right to continuing tenure on their ancestral lands, free from unethical and/or illegal land seizures or displacements.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
These rights should be considered inclusive for all primary producers (full or part time), in all types of ownership and production models. Spouses and relatives living and/or working as producers with their own enterprises should be included, along with indigenous peoples or tribal groups who hold land communally. These rights should apply to all sizes of enterprises, as well as all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations.		
3. Unit of Measurement or Metric		
This indicator asks whether primary producers have secure tenure of land and productive means to ensure right livelihood, whether through legal ownership or through leasing at reasonable and fair prices.		
4. How to Measure		
1. Interview primary producers to find out if they have fair access to the necessary means to production including the equipment they need for production and ownership and access to the infrastructure necessary to process, market and transport their products. 2. Interview primary producers to find out if they have access to fair credit terms.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): Primary producers have secure tenure of land and productive means (access to fisheries or wild harvesting) to ensure right livelihood, whether through legal ownership or through leasing at reasonable and fair prices. Red: SAFA score is reached if (any of the below conditions are met, despite if any of the above "Dark Green" conditions has also been met): • Producers do not own the land they need and must lease on an annual basis without assurances of continued, secure tenure. • Producers are in debt to the owners of the land they lease. • Producers are expelled from the lands they lease without just cause.		
6. Limitations of the Core Indicator		
If the rights of primary producers to land and productive means are not secured, primary producers receive a red score in SAFA, whereas the conditions leading to them not being able to practice these rights are most often out of their control. Thus the final reading should be read with cau-		

tion not to give the indication that primary producers are “punished” for their lack of rights.

7. Sources of information

1. Universal Declaration of Human Rights (article 17):
<http://www.un.org/en/documents/udhr/index.shtml>

Core Indicator name		
Suppliers' freedom of association and right to collective bargaining (S 2.1.1)		
Dimension Social	Theme Fair Trading Practices (S 2)	Sub-theme Responsible Buyers (S 2.1)
1. Description		
Supplier's, particularly primary producers, rights to freedom of association and collective bargaining are basic freedoms that form the necessary basis and prerequisite conditions for fair trading with buyers to be established. This indicator refers to buyers treating the primary producers who supply them with farm products with respect, as well as other suppliers such as processors and other businesses. Especially in regards to primary producers, buyers are expected to acknowledge and even facilitate their freedom of association, to support development of relationships based on balanced power and equality. With all suppliers, buyers should agree to negotiate all trading terms or engage in collective bargaining with these suppliers, their associations or their chosen representatives as individuals or in associations of their choosing.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This recognition should be inclusive of buyers in all trading relationships with suppliers, in all types of ownership and production models. This indicator shall be measured and rated by whether the buyers recognize these fundamental rights of all suppliers.		
3. Unit of Measurement or Metric		
The indicator asks whether buyers explicitly recognize and support in good faith primary producers and suppliers' rights to freedom of association and to collective bargaining for all contracts and agreements.		
4. How to Measure		
Measuring buyer's recognition of the rights of suppliers' freedom of association and to collective bargaining, with special attention to primary producers, should include at least the following metrics: • Review of any written or formal contracts or agreements to confirm said rights and freedoms • Review of any social audits, certifications, inspections or other third-party label or social marketing claims • In the case of verbal contracts, interviews with both producers in their native languages and their buyers to confirm that these rights and freedoms are clearly understood by all parties involved. • Interviews with primary producers and their families in their native languages should also confirm that such rights can be initiated at their discretion.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): Buyers have long term relationships of trust with 100% of their suppliers based on their rights to freedom of association and collective bargaining. Red: SAFA score is reached if (any of the below conditions are met, despite if any of the above "Dark Green" conditions has also been met): • Buyer retaliation against supplier for initiating their rights and freedoms including canceling of contracts and verbal threats against producers; • Restrictions on transparency and fair negotiations;		

- Refusal to allow supplier to have representative(s) of their choice present during any negotiations;
- Buyer making arbitrary changes to contract without agreement of supplier;
- Buyer pits one producer or group of producers against another;
- Failure to allow producers to share proposed contracts or agreements with family members and /or seek and retain legal counsel.

6. Limitations of the Core Indicator

Although this indicator does not apply for primary producers performing an assessment on their own operation, it is critical that primary producers who are suppliers to businesses performing an assessment are interviewed. This may be difficult to accomplish, but the relationships between primary producers, especially small or independent producers, and large businesses and buyers are critical points for ensuring fair relationships based on balanced power and equal negotiation. Primary producers may have to be interviewed by someone who speaks their language and has a good understanding of local conditions and attitudes to determine whether these rights and freedoms are clearly understood and respected.

7. Sources of information

- Universal Declaration of Human Rights: Article 20.
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO Convention concerning Freedom of Association and Protection of the Right to Organize (87/1948) - Part 1 "*Freedom of Association*":
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312232

Core Indicator name		
Fair pricing and negotiated contracts or agreements (S 2.1.2)		
Dimension Social	Theme Fair Trading Practices (S 2)	Sub-theme Responsible Buyers (S 2.1)
1. Description		
For sustained trading relationships to exist, buyers must pay primary producers prices for their products that reflect the real cost of the entire process of sustaining a regenerative ecological system, including supporting a right livelihood for primary producers, their families and workers as well as covering the buyer's costs based on full cost accounting. Fair pricing becomes possible when buyers agree to negotiate with their suppliers on terms of equality and together to create contracts, whether written or verbal, that set the terms of trade, including pricing, payment schedule, delivery schedules, quality standards, provisions for emergencies and other details, and a clear, mutually agreed upon conflict resolution process so that disputes between buyer and seller can be settled in a fair and open way, free from retaliation against the primary producer for raising issues. This right includes the buyer's obligation to make changes in contracts with primary producers only with mutual consultation and to terminate agreements only when there is just cause that can be documented. When bargaining in good faith occurs, all parties agree to transparency, to share financial records when requested and to share information about existing markets.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Fairly negotiated contracts should be the standard for buyers in all trading relationships with suppliers, in all types of ownership and production models. This indicator is not applicable to small-scale primary producers who too often lack the power to control marketing relations. This indicator is not applicable for primary producers, except in case of large-scale, intensive producers who have trading relationships with many input providers (e.g. feed, fertilizer, etc.)		
3. Unit of Measurement or Metric		
The indicator focuses on the type of policies and practices that recognize and support primary producers' rights to fair pricing and fair contracts.		
4. How to Measure		
• In the case of written contracts, review the contract language for inclusion of the negotiation process, conflict resolution process and agreement on conditions for terminating contract. • If contract is verbal, interviews in their native language with primary producers and their buyers should confirm full understanding by both parties and agreement on the terms of the contract. • Review the primary producers' financial records if these are maintained in writing. • In the absence of written financial records, interview the primary producers to learn what expenses (short term, long term, fixed and crop specific or variable costs) are covered by the prices received. • Is the producer able to pay taxes? Is the producer able to save money? Are payments made in a timely manner? Are prices stable? Are contracts long term? Is there enough money to make improvements and investments in the enterprise and training? • Interview primary producers and their buyers to ascertain whether the process of negotiating the prices was fair, open, and mutually respectful.		
5. Rating		

Dark Green SAFA score is reached if:

100% of trade deals with suppliers are based on contracts with buyers that include the rights to negotiate the terms of trade, a conflict resolution process for resolving differences and agreement that trade relations will not be terminated except for just cause.

Red: SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met):

- Buyers set prices without consultation with suppliers.
- Buyers retaliate against suppliers who raise issues or complaints about the terms of trade.
- Buyers terminate trade agreements with suppliers without just cause.
- Agreements lack mutually agreed upon process for conflict resolution.

6. Limitations of the Core Indicator

Primary producers have to be interviewed by someone who speaks their language and has a good understanding of local conditions and attitudes in order to determine whether fair prices and negotiated contracts and/or agreements have been guaranteed.

7. Sources of information

- Universal Declaration of Human Rights (articles 23 and 25):
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO Declaration on Social Justice for a Fair Globalization:
http://www.ilo.org/global/resources/WCMS_099766/lang--en/index.htm

Core Indicator name		
Employment relations (S 3.1.1)		
Dimension Social	Theme Labour Rights (S 3)	Sub-theme Employment relations (S 3.1)
1. Description		
Employment relations refer to enterprises maintaining legally binding transparent contracts with all employees that are accessible and covering the terms of work. Employment is compliant with national laws on labour and social security. Verbal terms of employment should be discouraged, however they are considered contracts by courts.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Transparent contracts or work agreements as defined herein should be considered inclusive for enterprises of all types and scales from one employee to large plantations or factories, in all types of ownership and production models.		
3. Unit of Measurement or Metric		
This indicator measures whether the enterprise has written agreements with their employees that meet and/or exceed national and international labour treaties including social security.		
For primary producers: whether there is a clear understanding of the wages and conditions of work between the employer and employees.		
4. How to Measure		
• Are there legally binding contracts that meet the above specifics available to employees upon request? • Review enterprise employment policies, manual and/or terms of employment documents to ensure they are meeting labor laws, treaties and include social security provisions. • Interview in private employees to compare their understanding of their terms of employment to that of the employer and/ or employee manual. • What is the case load and/or public record on local employers failing to meet this requirement? • Is the contract written in the employee's native language?		
5. Rating		
Dark Green SAFA score is reached if: In written policies and in practice enterprises provide legally binding contracts for all employees that meet labour laws and treaties. Red SAFA score is reached if (any of the below conditions are met, despite if any of the above "Dark Green" conditions has also been met): • No written contract or terms of employment are provided; • Contracts do not meet national and international labour laws and treaties; • Contracts not in a language spoken by employees ; • Employees (or both employers and employees) are not literate and no provision is made for third party verbal contract terms communications; • The contract is not made available to employees upon request.		
6. Limitations of the Core Indicator		
Lack of native language translation and the challenges of illiterate workers or primary producers pose on-going concerns, nevertheless, written contracts should be strongly encouraged as this creates a much more transparent and empowering workplace.		

7. Sources of information

- ILO, Convention concerning Employment Policy (No. 122/1964):
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312267
- ILO, Social Security (Minimum Standards) Convention (No. 102/1952):
<http://www.ilo.org/gimi/gess/ShowTheme.do?tid=722>
- ILO, Equality of Treatment (Social Security) Convention (No. 118/1962):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_COD E:C118
- ILO, Maintenance of Social Security Rights Convention (No. 157/1982):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_COD E:C157

Core Indicator name Forced labour (S 3.2.1)		
Dimension Social	Theme Labour Rights (S 3)	Sub-theme Forced labour (S 3.2)
1. Description		
While legal slavery has been abolished in the countries where it has been practised historically, it still exists in many surreptitious and hidden forms. Employers or their hired labour contractors or crew leaders keep workers' passports or other documents, thus preventing them from leaving or from protesting against work and living conditions they might find abhorrent. Workers take positions in foreign countries only to discover that the wages or living conditions are not what they were promised and find themselves stranded without the means or language skills necessary to switch to another job or to return home. Employers make the employment of one family member contingent on their spouse or other family member remaining on the job. Employers refuse to pay full earnings unless workers stay till the end of a season, threaten to expel workers from provided housing unless those workers stay on the job or work longer hours than they would choose or use other means of coercion and even physical and psychological threats and abuse. Finally, the most obvious case, employers contract with prisons for the use of inmate labour. Unfortunately, there are all too many variations on this theme in workplaces around the world.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This prohibition on forced labour should be adhered to by enterprises of all sizes, as well as all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations and should extend to all people employed whether full or part time, year round or seasonal.		
3. Unit of Measurement or Metric		
This indicator intends to find out whether the enterprise employs people who are not free to quit or who cannot raise grievances without fear of retaliation.		
4. How to Measure		
1. Strictly confidential interviews with employees to learn whether they work voluntarily or feel coerced. 2. Review enterprise policies on handling of employee documents. 3. Public records or reports of enterprises contracting for prison labor. 4. Review contracts for imported workers and compare with existing conditions.		
5. Rating		
Dark Green SAFA score is reached if: In written policies and in practice enterprises the use of forced labour is forbidden. Red SAFA score is reached if (any of the below conditions are met, despite if any of the above "Dark Green" conditions has also been met): • Employer withholds full wages until the end of a harvest season or completion of some quota of work. • Employer pressures one spouse to continue working in order to preserve the position of the other spouse. • Employer retaliates by reducing pay or with termination when employees raise important grievances. • Employer threatens to turn undocumented worker over to border patrol to force acceptance of low wages or poor working conditions. • Employer uses physical or psychological coercion to pressure worker to remain on the job		

or to accept low wages or poor or dangerous working conditions.
6. Limitations of the Core Indicator
The interviewer who verifies the absence of coercion must speak the language of the employees, and conduct interviews in conditions of strict confidentiality.
7. Sources of information
• Universal Declaration of Human Rights (article 4): http://www.un.org/en/documents/udhr/index.shtml • ILO, Convention concerning Forced or Compulsory Labour (No. 29/130): http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312174 • ILO, Abolition of Forced Labour Convention (No. 105/1957): http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0:::55:P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C105,/Document

Core Indicator name Child labour (S 3.3.1)		
Dimension Social	Theme Labour Rights (S 3)	Sub-theme Child labour (S 3.3)
1. Description		
The term “child labour” means work that deprives children of their childhood, their potential and their dignity, and that is harmful to physical and mental development. Whether child labourers work on their parents' farms, are hired to work on the farms or plantations of others, or accompany their migrant farm-worker parents, the hazards and levels of risk they face can be worse than those for adult workers. It refers to work that which is mentally, physically, socially or morally dangerous and harmful to children; and interferes with their schooling by depriving them of the opportunity to attend school; obliging them to leave school prematurely; or requiring them to attempt to combine school attendance with excessively long and heavy work. Whether or not particular forms of “work” can be called “child labour” depends on the child’s age, the type and hours of work performed, the conditions under which it is performed and the objectives pursued by individual countries. The answer varies from country to country, as well as among sectors within countries (ILO Convention 182). Not all work done by children should be classified as child labour that is to be targeted for elimination. Children’s or adolescents’ participation in work that does not affect their health and personal development or interfere with their schooling, is generally regarded as being something positive. This includes activities such as helping their parents around the home or family garden, assisting in a family business or earning pocket money outside school hours and during school holidays. These kinds of activities contribute to children’s development and to the welfare of their families; they provide them with skills and experience, and help to prepare them to be productive members of society during their adult life.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
The allowance for appropriate work by children and adolescents and the prohibition on “child labour” as defined herein should be considered inclusive for enterprises of all types and scales from one employee to large plantations or factories, in all types of ownership and production models.		
3. Unit of Measurement or Metric		
The indicator asks whether the enterprise or its subsidiaries or sub-contractors employ minor children, 16 years of age or younger, who are working full time or more , engaged in jobs that are dangerous to them physically, mentally or morally, and who are deprived of the opportunity to live as children, to attend school and/or other appropriate training.		
4. How to Measure		
1. Review enterprise policies and employment records. 2. Conduct confidential interviews with youthful employees to ascertain their true age, and to learn if they have left school voluntarily. 3. Public complaints of child labour observed.		
5. Rating		
Dark Green SAFA score is reached if: • In written policies and in practice enterprises refrain from hiring underage workers for full-time employment. • Enterprise helps fund or provides opportunities for education and recreation for the children of employees and their community.		

Red SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met):

- Employer hires workers for full-time positions who are under the age of 16 or fails to verify the true age of employees.
- Enterprise does not verify the practices of business partners, subsidiaries, input suppliers or sub-contractors to make sure that no minors are employed full time or that children are employed even part time in dangerous work.
- Employer assigns jobs to minors that are dangerous to them physically, mentally or morally.

6. Limitations of the Core Indicator

The interviewer who verifies the absence of child labour must speak the language of the employees, and conduct interviews in conditions of strict confidentiality.

7. Sources of information

- Universal Declaration of Human Rights (articles 26 and 29):
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO, Convention concerning Minimum Age for Admission to Employment (No. 138/1973):
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_ILO_CODE:C138
- ILO, Convention concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour (No. 182/1999):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C182

Core Indicator name		
Employees' freedom of association and rights to bargaining (S 3.4.1)		
Dimension Social	Theme Labour Rights (S 3)	Sub-theme Employees' Freedom of Association and Bargaining (S 3.4)
1. Description		
Employees' rights to freedom of association and collective bargaining are basic employee freedoms that form the necessary basis and prerequisite conditions for fair trading practices to be established and to flourish into the future.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
These rights should be considered inclusive for all employees, whether full or part-time and whether subcontracted or direct hire. This would apply for all types of ownership and production models. These rights should apply to enterprises of all sizes, as well as all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations. These rights apply to all labour throughout the agricultural supply chain from farms, to processing and distribution, to retail establishments. Subcontracted employees are not excluded from these universal rights.		
3. Unit of Measurement or Metric		
The indication asks whether there are any employees in an enterprise free to negotiate as individuals or as groups or through a union or representatives of their choosing to set the terms of their employment?		
4. How to Measure		
Measuring the rights of all labour to freedom of association and rights to collective bargaining should include at least the following metrics;		
• Review of any written or formal contracts or agreements to confirm said rights and freedoms. • In the case of verbal contracts, interviews in their native languages with both employers and their employees to confirm that these rights and freedoms are clearly understood by all parties involved. • Interviews with employees and their families in their native languages should also confirm that such rights can be initiated at their discretion.		
5. Rating		
Dark Green SAFA score is reached if: All of these rights are fully established and understood by all employees involved. Employers provide training in their legal rights for all employees. Red SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met): 4. Employer retaliation against employees for initiating the rights and freedoms including cancelling of contracts/ subcontracts and verbal threats against labour. 5. Restrictions on transparency and negotiations 6. Refusal to allow employees to have representative of their choice present during any negotiations 7. Employer makes arbitrary changes to contract without agreement of employees; 8. Employer pits one employee or group of employees against another; 9. Failure to allow employees to share proposed contracts or agreements with family members and /or seek and retain legal counsel.		
6. Limitations of the Core Indicator		

Lack of native language translation and the challenges of illiterate workers pose on-going concerns, nevertheless, written contracts should be strongly encouraged as this creates a much more transparent and empowering workplace. The interviewer who verifies employees' freedom of association must speak the employees' language and conduct interviews in strict confidentiality.

7. Sources of information

- ILO, Convention concerning Freedom of Association and Protection of the Right to Organise (No. 87/1948) :
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312232
- ILO, Convention concerning the Application of the Principles of the Right to Organise and to Bargain Collectively (No. 98/1949):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C098
- ILO, Convention concerning Protection and Facilities to be Afforded to Workers' Representatives in the Undertaking (No. 135/1971):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312280:NO
- ILO, Convention concerning Organisations of Rural Workers and Their Role in Economic and Social Development (No. 141/1975):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312286:NO
- ILO Declaration on Social Justice for a Fair Globalization:
http://www.ilo.org/global/resources/WCMS_099766/lang--en/index.htm

Core Indicator name		
Non-discrimination (S 4.1.1)		
Dimension Social	Theme Equity (S 4)	Sub-theme Non-discrimination (S 4.1)
1. Description		
Sustainable enterprises do not discriminate against any employee or prospective employee based on race, creed, colour, national or ethnic origin, gender, age, handicap or disability (including HIV status), union or political activity, immigration status, citizenship status, marital status, or sexual orientation in hiring, job allocation, training, advancement, lay-offs or firing.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Enterprises of all types and production models, of all sizes from one employee to many, and all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations should shun discrimination. Enterprises should also require that all business partners, subsidiaries and sub-contractors practice non-discrimination.		
3. Unit of Measurement or Metric		
This indicator asks whether there the enterprise discriminates against particular groups or by sexual identity in hiring, job allocation, promotions and firing or in awarding contracts to suppliers.		
4. How to Measure		
1. Interview employees of an enterprise as well as its subsidiaries or sub-contractors to find out if they have experienced discrimination in hiring, placement and advancement within the enterprise, and primary producers to find out if they have experienced discrimination in competing for contracts to supply the enterprise or in pricing, contracts and benefits. 2. Review enterprise records for evidence of discrimination, such as clear distinctions among ethnic groups in job placement and advancement or salary differences. 3. Records of complaints to public or government agencies that oversee employment if such exist. 4. Review of supplier contracts for evidence of fair sourcing or discriminatory preference for primary producers of a particular ethnic or racial grouping.		
5. Rating		
Dark Green SAFA score is reached if: Enterprises have clear policies of non-discrimination and apply those policies consistently to all employees and in all dealings with suppliers. Red SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met): • Employers give preference to one ethnic or racial group over others in hiring, placement, training and advancement. • As buyers, enterprises give preference to one ethnic or racial group over other in awarding contracts. • Enterprises pit one ethnic or racial group against another to drive down prices or conditions of work.		
6. Limitations of the Core Indicator		
The interviewer who verifies the absence of discrimination must speak the language of the employees, and conduct interviews in conditions of strict confidentiality.		

7. Sources of information

- ILO Declaration on Social Justice for a Fair Globalization:
http://www.ilo.org/global/resources/WCMS_099766/lang--en/index.htm
- Universal Declaration of Human Rights (article 7):
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO, Convention concerning Discrimination in Respect of Employment and Occupation (No. 111/1958):
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO:12100:P12100_INSTRUMENT_ID:312256
- ILO, Convention concerning Equal Opportunities and Equal Treatment for Men and Women Workers: Workers with Family Responsibilities (No. 156/1981):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_COD E:C156

Core Indicator name		
Gender equality (S 4.2.1)		
Dimension Social	Theme Equity (S 4)	Sub-theme Gender Equality (S 4.2)
1. Description		
This indicator intends to ensure that barriers to the employment of women on an equal basis with men are removed, that women receive equal pay for the same or similar work and have equal opportunities for training and advancement. In addition, there are special protections for women employees: enterprises adopt appropriate measures to ensure that pregnant or breastfeeding women are not obliged to perform work which has been determined by the competent authority to be prejudicial to the health of the mother or the child, or where an assessment has established a significant risk to the mother's health or that of her child. After a child is born, women are entitled to a period of maternity leave of not less than 14 weeks. When they return to work, women are allowed to nurse their babies during paid work time. Medical benefits are provided for the woman and her child in accordance with national laws and regulations or in any other manner consistent with national practice. Medical benefits include prenatal, childbirth and postnatal care, as well as hospitalization care when necessary. Furthermore, employers never terminate the employment of a woman during her pregnancy or absence on maternity leave or during a period following her return to work, except on grounds unrelated to the pregnancy or birth of the child and its consequences or nursing. The burden of proving that the reasons for dismissal are unrelated to pregnancy or childbirth and its consequences or nursing rest on the employer. Finally, women are guaranteed the right to return to the same position or an equivalent position paid at the same rate at the end of her maternity leave.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Enterprises of all types and production models, of all sizes from one employee to many, and all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations should remove gender barriers to hiring women and pay them equally for equal work. Enterprises should also require that all business partners, subsidiaries and sub-contractors remove gender barriers and practice non-discrimination towards women.		
3. Unit of Measurement or Metric		
The indicator measures whether the enterprise has discriminated against women in hiring, remuneration, training, advancement, access to resources or firing.		
4. How to Measure		
1. Interview female employees of an enterprise as well as its subsidiaries or sub-contractors to find out if women have experienced discrimination in hiring, placement and advancement within the enterprise, and female primary producers to find out if they have experienced discrimination in competing for contracts to supply the enterprise or in pricing, contracts and benefits. 2. Review enterprise records for evidence of gender barriers and discrimination against women, such as clear distinctions in job placement and advancement or salary differences between men and women in the same or very similar positions. 3. Records of complaints to public or government agencies that oversee employment if such exist. 4. Court records of suits on behalf of female workers.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled):		

- Enterprises have clear policies of hiring women based on their individual skills and abilities, and pay women at the same rate as men for the same or very similar work, and apply those policies consistently to all employees and in all dealings with suppliers.
- Enterprises have special policies for pregnant women to spare them from work that might endanger them or their baby, provide at least 14 weeks of paid maternity leave, rehire them in the same job when they return and allow them to nurse their babies during paid work time.

Red SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met):

- Employers give preference to men in hiring, placement, training and advancement.
- As buyers, enterprises give preference or pay higher prices to male primary producers in awarding contracts.
- Enterprises fail to provide for the safety of pregnant women employees, do not provide paid maternity leave, fire women who take time off to have a baby or refuse to allow women to return to their previous position or a position with similar wages when they return from maternity leave, and do not allow women to nurse during working hours.

6. Limitations of the Core Indicator

The interviewer who verifies the absence of discrimination against women must speak the language of the employees, and conduct interviews in conditions of strict confidentiality. Familiarity with local customs, mores and attitudes is essential.

7. Sources of information

- Universal Declaration of Human Rights (articles 7, 23 and 25):
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO, Equal Remuneration Convention (No. 100/1951):
http://www.ilo.org/dyn/normlex/en/f?p=1000:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C100,%2FDocument
- ILO, Convention concerning the revision of the Maternity Protection Convention (No. 183/2000):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_INSTRUMENT_ID:312328:NO
- ILO, Convention concerning Equal Opportunities and Equal Treatment for Men and Women Workers: Workers with Family Responsibilities (No. 156/1981):
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100:P12100_ILO_CODE:C156

Core Indicator name		
Support to vulnerable people (S 4.3.1)		
Dimension Social	Theme Equity (S 4)	Sub-theme Support to vulnerable people (S 4.3)
1. Description		
Support to vulnerable people focuses on enterprises providing support and making accommodations for employees and primary producer suppliers at different life stages and differing levels of ability and disability. Enterprises can perform important services by providing targeted recruitment for minorities or the socially disadvantaged and language training for people who do not speak the dominant language or have not had the benefit of schooling. If a worker is injured on the job, the employer provides alternative work at a comparable wage to accommodate the disability. Young workers are never required to do tasks that will expose them to toxic chemicals or dangerous equipment or require them to work at night. Elderly workers are shifted to jobs that are less physically taxing. This is especially important in agricultural work on industrial-scale plantations that demand heavy labour at a rapid pace that wears out workers' bodies.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Enterprises of all types and production models, of all sizes from one employee to many, and all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations should provide support for and help protect vulnerable workers, the young, the disabled, the aged, and those who suffer from injuries on the job. As buyers, enterprises should not discriminate against primary producers who are aging, have suffered injuries, or come from minority groups in making agreements, contracts, pricing, benefits or any other capacity. Enterprises should also require that all business partners, subsidiaries and sub-contractors support the vulnerable.		
3. Unit of Measurement or Metric		
This indicator looks into policies and practices that have effectively accommodated varying levels of ability and disability, young workers and aged ones. It also asks whether the enterprise has provided resources to the local community to support vulnerable people with social and health services, training including languages, and cultural events.		
4. How to Measure		
1. Review enterprise policies and practices. 2. Are there community programs, such as health classes, language instruction, etc., to which the enterprise contributes? 3. Interview targeted employees of an enterprise as well as its subsidiaries or sub-contractors to find out if appropriate accommodations are made for the young, disabled, injured and aged within the enterprise. 4. Interview primary producers to find out if the enterprise has discriminated against aged producers, minorities, etc. in awarding contracts to supply the enterprise or in pricing, contracts and benefits. 5. Are there records of complaints to public or government agencies that oversee employment?		
5. Rating		

Dark Green SAFA score is reached if (all conditions must be fulfilled):

- Enterprise has clear policies for supporting vulnerable employees and primary producer suppliers, and apply those policies consistently to all employees and in all dealings with suppliers.
- Enterprise provides resources to the community to support social and health services, training programs including languages, and cultural events for women, minorities and the disadvantaged.

Red SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met):

- Enterprise fires workers who have been injured on the job or fails to provide alternative work that these workers are still capable of performing.
- As a buyer, enterprise fails to award contracts to primary producers from minority or disadvantaged groups.
- Enterprise assigns young workers to tasks that involve using toxic materials or dangerous equipment, or schedules them on night shifts.
- Enterprise does not provide jobs for the disabled.
- Enterprise does not provide work that is appropriate for elderly employees.
- Agricultural employer hires only athletic young men and fails to rehire them if they have suffered injuries or become older and slower.

6. Limitations of the Core Indicator

Smaller enterprises may have limited positions and thus less flexibility in accommodating workers at different life stages.

7. Sources of information

- Universal Declaration of Human Rights (articles 7, 22 and 23):
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO, Convention concerning Basic Aims and Standards of Social Policy (No. 117/1962):
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312262

Core Indicator name		
Workplace safety and health provision for employees (S 5.1.1)		
Dimension Social	Theme Human Health and Safety (S 5)	Sub-theme Workplace safety and health provisions for employees (S 5.1)
1. Description		
Employers are responsible for providing a safe and healthy workplace for all personnel and employees. That begins by providing workplace facilities that are clean, adequately ventilated, and that are structurally sound and meet or exceed local building codes. Electrical wiring is inspected regularly and all equipment is serviced according to specifications. By providing training in health and safety, enterprises empower employees to understand the possible hazards of the workplace, to have thorough familiarity with the materials and machinery they work with and are exposed to, and to understand the ergonomics of the work so that injuries from repeated motions, lifting or other physical challenges will be reduced. Employees have access to full information about the materials and equipment with which they work. Manufacturers' descriptions of the toxicity of materials are posted where employees have access to them. The enterprise provides protective equipment, if needed, free of charge to employees. The enterprise monitors the health of employees who are exposed to toxic, radioactive or nano- materials or excessive noise and sets reasonable limits to exposure. Enterprises can also encourage and even provide incentives for preventive health measures, healthy eating, exercise, cessation of smoking, and treatment for workers addicted to drugs or alcohol. The workplace can include showers for workers who ride bicycles to work or need to wash off dust or toxic materials to which they have been exposed on the job, and gardens where employees can take breaks or even grow food. If an enterprise is large enough to have a cafeteria, the food provided is safe, fresh, locally produced and nutrient dense. Agricultural enterprises allow employees to take food for themselves and their families or purchase food at a discount. Larger enterprises have a clinic with medical personnel available on site, while smaller enterprises provide access to the medical care of choice for their employees. Finally, enterprises provide health coverage, either in the form of health insurance, workers compensation or public health services as provided by local law.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Enterprises of all types and production models, of all sizes from one employee to large factories or plantations, and all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations should provide a safe workplace, health and safety training and health coverage as provided by local law. Enterprises should also require that all business partners, subsidiaries and sub-contractors provide safe and healthy workplaces, health and safety training and health coverage of their employees.		
3. Unit of Measurement or Metric		
This indicator asks whether the enterprise has been providing training in health and safety, ensuring a safe, clean and healthy workplace and providing health coverage for employees.		
4. How to Measure		
1. Inspect the workplace. If there is a cafeteria, taste the food and read the menu. 2. Interview employees of the enterprise as well as its subsidiaries or sub-contractors to find out		

if health and safety policies are followed consistently and thoroughly.

3. Review enterprise policies and records of accidents.
4. Review employee-training logs and confirm that employees have been trained on a regular basis for health and safety, in their appropriate language.
5. Review enterprise records to ascertain that payments for health coverage or workers' compensation are being paid.
6. Check the public record for suits against the enterprise for mistreatment or neglect of workers, or for records of complaints.

5. Rating

Dark Green SAFA score is reached if (all conditions must be fulfilled):

- Enterprise is safe, clean and all structures and equipment are sound and well maintained.
- There are fewer accidents than the industry average.
- Enterprises provide thorough training in health and safety for employees and full transparency for employees about the materials and equipment used.

Red SAFA score is reached if (any of the below conditions are met, despite if any of the above "Dark Green" conditions has also been met):

- Enterprise fires workers who have been injured on the job or fail to provide alternative work that these workers are still capable of performing.
- Enterprise does not provide thorough health and safety training in a language that employees understand.
- Enterprise does not make full information on materials and equipment available to employees.
- Enterprise has a higher rate of accidents than industry average.

6. Limitations of the Core Indicator

Smaller enterprises will not have the resources to support clinics, shower rooms and similar facilities, or to pay for health insurance, but they can still provide careful training for all workers in health and safety. Primary producers can share produce with their employees.

7. Sources of information

- Universal Declaration of Human Rights (articles 22, 23 and 25):
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO, Convention concerning Basic Aims and Standards of Social Policy (No. 117/1962):
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312262

Core Indicator name Public health (S 5.2.1)		
Dimension Social	Theme Human Health and Safety (S 5)	Sub-theme Public Health (S 5.2)
1. Description		
This indicator refers to enterprises ensuring that operations and business activities do not limit the healthy and safe lifestyles of the local community by polluting or contaminating water, air and soils. Furthermore, a larger-scale enterprise makes positive contributions to community health resources and services by providing financial support, while a family-scale primary producer contributes by selling healthy, clean, locally grown food. Farms of any size can contribute culls and edible excess produce to the local emergency food supply.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Enterprises of all types and production models, of all sizes from one employee to large factories or plantations, and all types of ownership structures including cooperatives, single-family units, collectives, community-owned land trusts, tribal associations, and plantations should take care to prevent contamination or pollution of the surrounding community. Small-scale enterprises may omit the second part of the indicator referring to the contribution to the food supply and health of the community.		
3. Unit of Measurement or Metric		
This indicator asks whether the enterprise (i) takes measures to avoid polluting or contaminating the local community and (ii) contributes to the health of the local community.		
4. How to Measure		
1. Inspect the enterprise or review certifications that show that the enterprise does not use materials that pollute or contaminate surrounding areas and maximizes the use of renewal energy sources. 2. Review enterprise policies, particularly decisions about future plans for change or expansion. 3. Check the public record for evidence of enterprise contributions to area health services, donations to emergency food supplies, and for programs that educate and inform the local population about healthy living.		
5. Rating		
Dark Green SAFA score is reached if (all conditions must be fulfilled): • Enterprise refrains from using materials or practices that contaminate or pollute water, air or soils, minimizes the use of fossil fuels while maximizing recycling, carbon sequestration and the use of renewable sources of energy. • Enterprise provides educational health services, and programs that educate and inform the local population about healthy living. Red SAFA score is reached if (any of the below conditions are met, despite if any of the above “Dark Green” conditions has also been met): • Enterprise pollutes water, air and soils with toxic materials. • Enterprise expands without consideration for other area residents and their needs.		
6. Limitations of the Core Indicator		
Smaller enterprises will not have the resources to provide financial support to local health services, nevertheless they can serve as centres of health in and of themselves and set an example		

for others to emulate.

7. Sources of information

- Universal Declaration of Human Rights (articles 22, 23 and 25):
<http://www.un.org/en/documents/udhr/index.shtml>
- ILO, Convention concerning Basic Aims and Standards of Social Policy (No. 117/1962):
http://www.ilo.org/dyn/normlex/en/f?p=1000:12100:0::NO::P12100_INSTRUMENT_ID:312262

Core Indicator name		
Indigenous knowledge (S 6.1.1)		
Dimension	Theme	Sub-theme
Social	Cultural Development (S 6)	Indigenous Knowledge (S 6.1)
1. Description		
Intellectual property rights related to traditional and cultural knowledge are protected, and recognized. This category is inclusive of a broad range of cultural knowledge – art, rituals, and indigenous customs in general as well as specifically including agricultural knowledge concerning growing methods, techniques, seeds and their uses, medicinal plants and their uses. Communities concerned are remunerated in a fair and equitable way, based on mutually agreed upon terms, which explicitly provides for continued access and on-going applications of this knowledge for their communities.		
2. Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
Indigenous knowledge as defined herein should be considered inclusive for enterprises of all types and scales from small scale –primary producers to large plantations, factories, or multinational companies with all types of ownership and production models. Enterprises should also require that all business partners, subsidiaries and sub-contractors remove gender barriers and practice respect for indigenous knowledge.		
3. Unit of Measurement or Metric		
This indicator asks whether enterprises (i) recognize and respect the universal rights of indigenous communities to protect their knowledge and (ii) if appropriated and acquired, whether enterprises remunerated indigenous communities in a fair and equitable manner, based on mutually agreed upon terms.		
4. How to Measure		
1. Are there legally binding contracts that meet the above specifics for review upon request? 2. Review enterprise policies, manual and/or other documents to ensure they explicitly recognize said rights. 3. Interview affected or concerned indigenous communities to compare their understanding of their protection and enterprise recognition of their rights to their knowledge. 4. What is public record of cases filed against said enterprise regarding appropriation of indigenous knowledge without permission or fair remuneration? 5. If such agreements are written, are they available in the appropriate native language(s)?		
5. Rating		
Dark Green SAFA score is reached if: In written policies and in practice enterprise meets all national and international laws and treaties concerning indigenous knowledge. Red SAFA score is reached if (any of the below conditions are met): • No written documentation of mutually negotiated terms when indigenous knowledge is being exploited by the enterprise. • Contracts do not meet national and international laws and treaties. • Contracts not available in a language spoken by peoples involved. • Enterprise has filed for intellectual property rights over said indigenous knowledge without the permission of the indigenous group involved or without fair and equitable remuneration.		

6. Limitations of the Core Indicator
When there are no written contracts due to illiteracy or language barriers, in person interviews will be necessary. Interviews with indigenous people must be conducted in a language they understand, and the interviewer must be familiar with local customs, mores and attitudes.
7. Sources of information
• UN, Declaration of the Rights of Indigenous Peoples, 2006: http://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

Core Indicator name Food Sovereignty (S.6.2.1)		
Dimension Social	Theme Cultural Development (S6)	Sub-theme Food sovereignty (S.6.2)
1. Description		
Based on a renewal of traditional agrarian and indigenous wisdom, Food Sovereignty encompasses the need for a more just, local and sustainable food system that affirms the underlying values of democracy, empowerment and self-determination. Food Sovereignty results in a just, ecologically harmonious and local food and agriculture system, which is derived from the right of peoples and communities to define it themselves. Generally, food sovereignty is discussed at a community level and is considered inclusive of all types of ownership and production models in communities of every ethnicity and variety and both rural and urban. This indicator, however, applies to the individual enterprise being assessed and it measures whether the operation has choices between different inputs and raw materials and marketing outlets. Access to choice reflects the independence of the enterprise and the ability of the food chain to have control or ownership over their production and supply system. This indicator also measures whether the operation contributes to food sovereignty by making choices that reinforce this independence for other operations.		
2 Relevance to enterprise type (i.e. small or large enterprise in terms of acreage, labour and mechanization) and supply chain levels (i.e. primary production, processing, marketing)		
This indicator is relevant to operations of all types and sizes. For primary producers and farms, this indicator refers mostly to availability of inputs, notably seeds of their choice. For buyers, processors and other secondary businesses in the agricultural chain, this indicator refers mostly to availability of raw materials or other ingredients from suppliers, as well as to marketing outlets.		
3 Unit of Measurement or Metric		
The presence of choice and independence of the enterprise is measured here by assessing whether the following criteria apply to all relevant business decisions of the operation: • Does the operation source locally adapted seed varieties or livestock breeds, or traditional or heirloom varieties for at least a majority of their production? • Does the operation maximize purchases from local producers specifically using heirloom or traditional varieties instead of importing, or buying non-traditional varieties, for at least a majority of their raw material needs? • Has the operation avoided changes in production or purchasing that would eliminate seed saving, or the use of heirloom, traditional or locally adapted varieties or breeds in their own production or that of their suppliers? • Has the operation avoided changes in production or purchasing that would limit market access and consumers freedom to choose?		
4 How to Measure		
This indicator is measured in four steps, by addressing each of the criteria above individually: 1. The first criterion is relevant to primary producers or any operations involved directly in agriculture. It is measured by reviewing the used seed varieties or livestock breeds of the operation, and calculating the percentage of which are traditional, heirloom, or locally adapted seeds and breeds. If the total is greater than 50%, the operation meets the first criteria. 2. The second criterion is relevant to any operation that purchases inputs, such as ingredients or raw materials, from suppliers. It is measured by reviewing all agricultural product		

purchases and determining the percentage of which are bought from local producers using heirloom, traditional or locally adapted seeds and breeds. If this total is greater than 50%, the enterprise meets the second criteria. 3. The third criterion is relevant to all operations that have already met one or both of the first two criteria. For producers, it is measured by determining if any changes in production, such as choices to grow different crops or compete in different markets, have eliminated their ability to save seeds, or have eliminated their ability (whether because of space, financial decisions or time investment) to continue to grow heirloom, traditional or locally adapted seeds and breeds. If this kind of change has happened, the operation does not meet the third criteria. If this kind of change has been avoided, the operation does meet the third criteria. For operations that purchase their inputs from suppliers, the third criteria is measured by determining if any changes in their purchasing (such as requests for different ingredients or specifications on qualities/quantities of produce) have resulted in the elimination of their suppliers' ability to save seeds, or of their suppliers' ability to grow or use heirloom, traditional or locally adapted varieties. If this type of change has occurred, the operation does not meet the third criterion. If this type of change is avoided, the operation does meet the third criterion. 4. The fourth criterion is measured in two steps. First, by determining if any changes in production or purchasing have resulted in reducing options available to consumers. This can be assessed by considering if changes or practices (such as reducing diversity of production on farm, or buyers placing stipulations on suppliers that encourage monoculture or otherwise limit diversity of production on farms) impact local marketplaces by reducing the amount of agricultural products grown and sold locally. Secondly, this can be assessed by considering if any practices or changes of the enterprise have resulted in impacts on their fellow producers or on the producer community of their suppliers that would limit their access to the marketplace (for example through contamination that prevents access to choice markets, unfair use of resources that limits options for other producers, etc.)	5 Rating
Dark Green: is reached if all the following conditions are fulfilled: The operation meets all relevant criteria as defined in the unit of measurement. Red: reached if any of the below conditions are met, despite if any of the above "Dark Green" conditions has also been met: • If criterion three is not met as a result of the operation directly eliminating their own or other operations' seed saving, or traditional variety use. • If the operation is acting as a buyer, and directly limits their ability to choose the traditional varieties or breeds used. • If the operation is acting as a buyer and negotiates a price that undermines their suppliers ability to choose the traditional varieties or breeds used. • If the activities of the operation have contributed to contamination or interference with other producers' ability to save seed, or use traditional varieties.	6 Limitations of the Core Indicator
This indicator examines only one facet of food sovereignty and should not be considered a complete assessment of whether the enterprise is contributing positively or negatively to food sovereignty. For example, it does not directly consider production methods or the policy context of the operation, which may have significant implications for food sovereignty in that region. Furthermore the assessor must be careful to determine the traditions of the community in which	

that operation is located, or where its suppliers are located, through interviews with locals or other direct means in order to ensure that what is truly a traditional or heirloom variety is correctly weighted, and that impacts on fellow producers are duly considered.

7 Sources of information

- Universal Declaration of Human Rights (articles 17 and 25):
<http://www.un.org/en/documents/udhr/index.shtml>
- NGO/CSO Forum for Food Sovereignty, *Food Sovereignty: a Right for All*. Rome, June 8-13, 2002: <http://www.nyeleni.org/spip.php?article125>

Appendix B: Select Sustainability Tools

Scope of selected sustainability tools as compared to the SAFA landscape

Tool Type/Name	Steps of the value chain impacts covered			Sustainability dimensions covered			
	Production	Processing	Retail	Environ-ment	Economy	Govern-ance	Social
FootPrint Calculators							
Cool Farm Tool	X			x			
Water/Carbon/Biodiversity FootPrint tools (e.g. WRI/WBCSD, TEEB/WWF)	X			x			
Directories (meta level)							
UN International Trade Centre Trade for Sustainable Development (T4SD)	X	x	x	x	X	x	x
Ecolabel Index	X	x	x	x	X		x
International References, Norms and Instruments							
OECD Environmental Indicators	X	x	x	x			
International Labour Organization, Core Conventions	X	x	x				x
System Benchmarking and Rating/Platform							
Global Social Compliance Programme (GSCP) Reference Tools (2011 versions)	X	x	x	x		x	x
People 4 Earth	X			x	X	x	x
Sustainability Standards Transparency Initiative (GIZ, ITC, ISEAL)	X			x	X	x	x
Sustainability Assessment: Impact							
Committee On Sustainability Assessment (COSA)	X			x	X	x	x
Life Cycle Assessment (ISO 14040, ISO 14044)	X	x	x	x			
Response-Inducing Sustainability Evaluation (RISE, version 2.0)	X			x	X		x
Sustainability Monitoring and Assessment RouTine (SMART). FiBL	X	x	x	x	X	x	x

Sustainability Assessment (self)							
Biodiversity Risk and Opportunity Assessment (BROA) Tool	X			x			
Field to Market. Field Print Calculator	X			x			
People 4 Earth	X			x	X	x	x
SAI Platform Sustainability Performance Assessment (SPA; April 2012 draft)	X			x	x1		(x)
Soil and More Foundation Sustainability Flower Quick Assessment	X			x	X		x
Sustainability Assessment: Lifecycle							
Life Cycle Assessment (ISO 14040, ISO 14044)	X	x	x	x			
Social Life Cycle Assessment (S-LCA). UNEP-SETAC 2009	X	x	x	x	x	x	x
Voluntary Sustainability Standards							
The IFOAM Norms for Organic Production and Processing Version 2012	X	x		x		x	x
4C Association, Code of Conduct (version 1.2)	X			x	x	x	x
FLO-Cert Generic Fairtrade Standards (2011 versions)	X	x	x	x	x	x	x
Forest Stewardship Council (FSC) Forest Management Standard	X			x	x		x
GlobalG.A.P. control points and major musts (version 4.0)	X			x	x	x	x
Proterra Standard V3	X			x	x	x	x
Roundtable on Sustainable Biofuels, Impact assessment Guidelines (version 2.0; 2011)	X	x		x	x	x	x
Sustainable Agriculture Network, Standards for Sustainable Agriculture (2010)	X			x	x	x	x
Sustainability Reporting							
Global Reporting Initiative (GRI) G3.1 Guidelines	X	x	x	x	x	x	x
Sustainability Assessment (corporate)							
SAM Sustainability Investing, Corporate sustainability assessment questionnaire	X	x	x	x	x	x	x
Unilever Sustainable Agriculture Code (2010 version)	X			x		x	x
Wal-Mart Sustainability Index	X	x		x		x	

x1: Farm financial stability and occupational health and safety are not yet considered in SPA (April 2012), but inclusion is intended for future versions.

Explanatory notes: sustainability dimensions are interpreted in accordance with the SAFA thematic scope (for details, see part C of the Guidelines). “x” indicates that at least single, but not necessarily all, aspects of this dimension are taken into account in the approach.

Appendix C: SAFA Performance Report Checklist

About Your Company: Description of the Assessed entity



☒	Company name, location, primary products/services, legal form
☐	Statement of goals and purpose of SAFA including role of sustainability in the organization, intended audience and intended use of results.
☐	Description of assessed entity including geographical, size (smallholder and rationale) and sector specific information.
☐	Operational structure of the organization and countries including operating companies, subsidiaries and joint ventures with either major operations or that are specifically relevant to the sustainability issues covered in the SAFA

Mapping: Sphere of influence: material, spatial and temporal system boundaries



☐	Defined scope for that SAFA assessment, including a description of the assessed entity and intended reporting cycle.
☐	Defined physical and spatial system boundaries, in relation with the sphere of influence and impact.
☐	Is the whole entity covered by SAFA? If not: what steps of the value chain are covered: primary production, processing and/or retail? Why did you decide to include the entities that you chose, and why did you leave out others?
☐	A description and justification of cut-off and impact allocation criteria
☐	Visual representation of value chain, relationships and boundaries

Contextualization of Sub-themes and Core Indicators



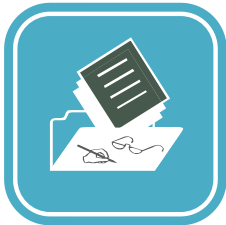
☐	List of relevant SAFA sustainability themes and sub-themes including declaration and justification of sub-themes deemed not relevant
☐	Data sources for consideration in the assessment
☐	Detailed ratings for each Core Indicator using the data about their geographic/environmental, social, political and economic context
☐	Identify any critical areas based on materiality principles for the context of that entity, acknowledging the relevance and disclose on those issues or disclose limitations in data availability

Indicators: Tools, Ratings and Aggregation of results



	List of tools, metrics and standards for data collection, qualified by type (3rd party verified, primary, secondary, etc)
	Calculated Accuracy Score at indicator, sub-theme and theme level
	Documentation of input data and score
	Listing of customized ratings for intermediate levels
	Rating at indicator level, aggregation of results at sub-theme and theme level including methodology (mean, lowest score, etc)
	A written interpretation of the ratings and weightings

Final Report



	Written synthesis of all of the above components
	A visual representation of SAFA results of ratings (polygon(s) over traffic light color bands) for each dimension showing sub-themes and aggregated level
	Disaggregation of results at sub-themes level
	List of all Core Indicators with orange or red scores (hot spots)
	Disclosure of assessment procedure including description of limitations and Boundaries
	Accuracy Score at sub-theme and them levels with any other limitations
	Will a critical review be undertaken to check whether the procedure and the interpretation of results is correct? If yes, what type: internal or external?
	Use of SAFA Results, sharing and learning goals
	Contact point for questions regarding the report or its contents.

Appendix D: Glossary

Agricultural biodiversity: agricultural biodiversity encompasses the variety and variability of animals, plants and microorganisms which are necessary to sustain the functions of the agro-ecosystem, its structure and processes for, and in support of, food production and food security.

Areas of high biodiversity value: habitats recognised for important biodiversity features by governmental or non-governmental organisations, or through a biodiversity assessment. This includes, but is not restricted to, areas protected by law.

Audit: a systematic and functionally independent examination to determine whether activities and related results comply with planned objectives (CAC, 1995).

Auditor: individual or group of individuals, belonging to an organisation, or a natural or legal person external to that organisation, acting on behalf of that organisation, carrying out an assessment of the sustainability management system in place and determining conformity with the organisation's sustainability policy and programme, including compliance with the applicable requirements relating to sustainability (modified after EC, 2009).

Benchmark: in SAFA, benchmarks are values, with which the performance of an enterprise in an indicator domain is compared to facilitate a rating of sustainability performance. Regional and/or sectoral averages, as well as defined average (standard) and best practice values can be used as benchmarks.

Best practice: similar to “leading practices”, as defined by GSCP (2010); proactive identification, development and adoption of the latest technology, techniques or practices that contribute to a better sustainability performance.

Biodiversity: the diversity within species, between species and of ecosystems, including terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part⁴.

CSR reporting: most common type of sustainability reporting. Regular communication of information on economic, social, environmental and governance performance to shareholders, stakeholders and the general public. Other types of sustainability reporting include CSV reporting and triple bottom line reporting.

Cut-off criteria: specification of the amount of material or energy flow, or the level of environmental significance, associated with unit processes or product system to be excluded from a study (ISO, 2009).

Due diligence: identification, prevention and mitigation of the actual and potential adverse impacts of an enterprise's activities; integral part of business decision-making and risk management systems (OECD, 2011).

Externality: an externality is a cost or benefit which results from an activity or transaction and which affects an otherwise uninvolved party who did not choose to incur that cost or benefit. **Food and agriculture systems:** in the context of the SAFA Guidelines, systems that serve the production and marketing of goods that originate from agriculture, forestry or fisheries.

Food security: food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. The pillars of food security are availability, access, utilisation and stability (FAO, 1996).

Full-cost accounting: in SAFA, the collection and presentation of information about the direct and indirect economic, environmental and social costs of operations (Triple Bottom Line, “true cost accounting”).

Gender: social, economic and cultural roles and relations between women and men. Gender takes into account the different responsibilities of women and men in a culture or location, and in different population groups (FAO, 1997).

Generic: “characteristic of, or relating to, a class or group of things; not specific”(Oxford Dictionary). Here, the term refers to the meaning in mathematics, where properties are shared by almost all objects of a certain type. The SAFA Guidelines provide principles, processes and themes that should apply to (almost) all sustainability assessments in the food and agriculture sector.

Good corporate governance: the political system of an enterprise. It defines the rights of stakeholders, provides the separation of powers between management and supervisory board, and seeks to insure responsible leadership in all dimensions of the organisation (Maak & Ulrich, 2007).

Governance: the process of decision-making and the process by which decisions are implemented (UNESCAP, 2009).

Greening the Economy with Agriculture (GEA): refers to ensuring the right to adequate food, as well as food and nutrition security (see above) and contributing to the quality of rural livelihoods, while efficiently managing natural resources and improving resilience and equity throughout the food supply chain, taking into account countries’ individual circumstances (FAO Council, 2011).

Impact: primary and secondary long-term effects directly or indirectly produced by an intervention (OECD, 2002).

Indicator: quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess performance (adapted after OECD, 2002). An indicator provides evidence that a condition exists or certain results have or have not been achieved, and can be either quantitative or qualitative.

Livelihood: capabilities, assets (both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, and maintain or enhance its capabilities or assets while not undermining the natural resource base (Chambers & Conway, 1991).

Living wage: a wage ensuring for a person and his/her family an existence worthy of human dignity, and supplemented by other means of social protection (UN 1948, Article 23.3). It ensures a standard of living adequate for the health and well-being, including food, clothing, housing, medical care, necessary social services and the right to security (UN, 1948, Article 25.1).

Marketing: is holding for sale or displaying for sale, offering for sale, selling, delivering or placing on *the market in any other form (CAC, 1999).*

Metric: unit of measurement that is quantitative. often the basis for indicators.

Performance: degree to which an intervention or an entity operates according to specific criteria, standards and Guidelines, or achieves results in accordance with stated goals or plans (OECD, 2002).

Product: any goods or service (ISO, 2009). For the purpose of SAFA, goods based on materials produced through agricultural, forestry or fisheries activities during the production and processing of food, agricultural commodities or animal feeds.

Preparation: the operations of slaughtering, processing, preserving and packaging of food and agricultural products and also alterations made to the labelling concerning the presentation of the production method (CAC, 1999).

Production: the operations undertaken to supply food and agricultural products in the state in which they occur on the farm, including initial packaging and labelling of the product (CAC, 1999).

Rare species: species listed as vulnerable, endangered or critically endangered on the IUCN⁵ Red List, or found to be vulnerable or endangered by scientific sources or a field study.

Regional/local: regions can be defined based on homogeneity and functionality, both in relation with the activities whose sustainability is assessed. There is no single definition of the perimeter (in km) that can be used for distinguishing regional from supra-regional.

Renewable energy: energy derived from natural processes, such as sunlight and wind, replenished at a higher rate than they are consumed; for example solar, wind, geothermal, hydro, and biomass⁶.

Resilience: the ability to resist disturbance and return to an equilibrium after perturbations (equilibrium resilience); ability to absorb or accommodate shocks before the system changes (Holling & Meffe, 1996).

Sphere of influence: geographical area where an enterprise can show its power and influence in the decisions with other enterprises/organizations/groups.

Site: distinct geographic location under the management control of an organisation covering activities, products and services, including all infrastructure, equipment and materials (EC, 2009).

Soil degradation: reduction in the capacity of a soil to provide ecosystem goods and services, and to support agricultural and forestry production. Soil degradation can be caused by a variety of processes⁷.

Sustainability management: environmental and social management and corporate governance, in conjunction with financial management. Processes or structures that an organisation uses to meet its sustainability goals and objectives while transforming inputs into a product or service (modified after UNEPFI, 2006).

Sustainable: the capacity to sustain, or maintain. There are numerous definitions of sustainability but all converge on the need to reconcile environmental, social and economic demands for present and future generations.

⁵ International Union for Conservation of Nature and Natural Resources: www.iucnredlist.org

⁶ International Energy Agency Glossary of terms: www.iea.org/glossary/glossary_R.asp

⁷ FAO glossary of Land and Water Terms: www.fao.org/landandwater/glossary

Sustainable agriculture and rural development (SARD): management and conservation of the natural resource base, and the orientation of technological and institutional change in such a manner as to ensure the attainment and continued satisfaction of human needs for present and future generations. Such sustainable development (in the agriculture, forestry, and fisheries sectors) conserves land, water, plant and animal genetic resources, is environmentally non-degrading, technically appropriate, economically viable and socially acceptable (FAO, 1989).

Sustainable development: development processes that protect the natural resource base and ecosystem functions, enhance economic resilience and promote human rights and well-being in a manner that preserves future generations' ability to secure their needs.

Triple Bottom Line: The triple bottom line is a business approach to full-cost accounting that refers to three pillars: people (social), planet (environmental) and profit (economic).

Value chain: a mechanism that allows producers, processors, buyers, and sellers – separated by time and space – to gradually add value to products and services, as they pass from one link in the chain to the next until reaching the final consumer. The main actors in a value chain are suppliers, producers, processors, marketers and buyers. They are supported by a range of private and public technical, business and financial service providers. In a value chain, the various business activities in the different segments become connected and to some degree coordinated (UNIDO, 2011).

Well-being: the state of being or doing well in life; healthy, or prosperous condition; moral or physical welfare (of a person or community).

Appendix E: Sections 1-3 References

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