

**Thematic Evaluation Series**

**Evaluation of FAO's support to  
climate action (SDG 13) and the  
implementation of the FAO Strategy on  
Climate Change (2017)**

**Annex 1. Terms of reference**

# Contents

Acronyms and abbreviations.....	iii
<b>1. Overview .....</b>	<b>1</b>
<b>2. Background.....</b>	<b>2</b>
<b>3. Theory of change .....</b>	<b>10</b>
<b>4. Purpose and objectives of the evaluation.....</b>	<b>11</b>
<b>5. Scope of the evaluation.....</b>	<b>12</b>
<b>6. Evaluation questions.....</b>	<b>14</b>
<b>7. Methodology.....</b>	<b>15</b>
<b>8. Implementation and time frame (tentative).....</b>	<b>22</b>
<b>9. Evaluation framework .....</b>	<b>25</b>
<b>10. Limitations .....</b>	<b>23</b>
<b>11. Governance, management and quality assurance.....</b>	<b>24</b>
<b>Bibliography .....</b>	<b>25</b>
<b>Appendix 1. Overview of FAO's work on climate change (not exhaustive)..</b>	<b>27</b>

## **Acronyms and abbreviations**

CCAM	Climate change adaptation and mitigation
CSA	Climate-smart agriculture
DRR	Disaster risk reduction
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
GEF	Global Environment Facility
GHG	Greenhouse gas
IPCC	Intergovernmental Panel on Climate Change
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NDCs	Nationally Determined Contributions
OCB	Office of Climate Change, Biodiversity and Environment
OED	FAO Office of Evaluation
REDD	Reducing Emissions from Deforestation and Forest Degradation
SDG	Sustainable Development Goal
SSTC	South-South and triangular cooperation
UNFCCC	United Nations Framework Convention on Climate Change

# 1. Overview

1. At its 127<sup>th</sup> session, the Programme Committee of the Food and Agriculture Organization of the United Nations endorsed the Indicative Rolling Work Plan of evaluations 2020-2022 (FAO, 2019a), entailing an evaluation of FAO's support to climate action (SDG 13) and the implementation of the FAO Strategy on Climate Change (2017); hereafter referred to as the SDG 13 Evaluation . Given the strong relationship between the targets of SDG 13 and the United Nations Framework Convention on Climate Change (UNFCCC), the evaluation will also include the contribution of FAO to the commitments of the Paris Agreement (2015). The SDG 13 Evaluation is the second SDG-based evaluation conducted by the FAO Office of Evaluation (OED) after the Evaluation of Sustainable Development Goal 2 – “End hunger, achieve food security and improved nutrition and promote sustainable agriculture” (hereafter referred to as the SDG 2+ Evaluation). The SDG 13 Evaluation builds on the conceptual and methodological basis established by the SDG 2+ Evaluation (FAO, 2020a).
2. With a multitude of initiatives that deal with mitigation and adaptation, FAO works towards the adoption of low carbon development pathways and the achievement of climate-resilient development. It does so through initiatives that directly target climate action (the combination of activities that contribute to adaptation to and mitigation of the effects of climate change), but also indirectly, through initiatives in other focus areas which also contribute to climate action. The vast majority of FAO's work, be it on agricultural production, animal husbandry, fisheries, forestry or food systems, relates to climate adaptation or mitigation. So while their main focus is to contribute to other global goals, such as poverty reduction (SDG 1), zero hunger (SDG 2), life below water (SDG 14) and life on land (SDG 15), by doing so, they also contribute to climate action. Important cross-cutting themes, such as gender equality, nutrition, good governance, indigenous peoples and human rights, also interact with climate action through various ways. Finally, climate change itself being a cross-cutting theme in FAO's Strategic Framework implies that the potential positive or negative impact of any FAO activity on climate change should be assessed and understood, whether or not such activities directly or indirectly target climate action. Therefore, this evaluation will cover the entire FAO portfolio and institutional structure to assess its contribution to SDG 13 targets directly or indirectly through other SDG targets. The methodology of this evaluation will address these connections and synergies, as well as trade-offs and complementarity.
3. These terms of reference (TOR) define the evaluation background, purpose, scope and objectives as well as the evaluation questions. It presents the detailed methodology to be applied throughout the evaluation process and presents the expected management arrangements and evaluation timeline. It builds on the conceptual background presented in a previously developed concept note that was based upon documentary review and a series of scoping interviews with a broad group of people, within and outside FAO. During April and May 2020, this was further refined through a three-step consultation process that engaged many of these actors. The TOR were prepared by the evaluation team (ET) and will be discussed and approved by the Evaluation Reference Group (ERG; see management arrangements).

## 2. Background

### Impact of climate change on agriculture and food systems

4. Agriculture sectors<sup>1</sup> play multiple roles in the context of climate change. Agriculture is one of the economic sectors most affected by climate change, but is also a major contributor to greenhouse gas (GHG) emissions, and has therefore great potential to mitigate climate change. Land and water use, agriculture and food systems<sup>2</sup> are strongly climate dependent and therefore, directly affected by increasing temperatures and associated phenomena, such as changing precipitation regimes. Emissions of food production systems are estimated to make up between 21 to 37 percent of total net anthropogenic GHG emissions (IPCC, 2019). At the same time, when water, land and resource use are well managed, agriculture can become a fundamental economic sector to address both climate change mitigation, i.e. avoiding or capturing emissions as well as enhancing carbon sinks, and adaptation, i.e. enhancing capacities of societies and individuals as well as natural systems to be better prepared for the effects of climate change.
5. The World Meteorological Organization (WMO) report *The Global Climate in 2015–2019* (WMO, 2019) confirms that higher than average temperatures, changing precipitation patterns, and greater frequency of some extreme weather events are affecting food security. A multitude of examples illustrate this:
  - i. yields of main crops have changed;
  - ii. crops cannot be grown anymore in their traditional range;
  - iii. climate change is affecting the quantity and quality (in terms of micronutrient content) of the yield;
  - iv. animal growth and productivity have decreased in both pastoral and permanent livestock systems;
  - v. patterns of plant and animal pests and diseases are affected with increased risks;
  - vi. higher sea-surface temperatures endanger marine life and ecosystems and affect fish distributional patterns and lead to phenological changes;
  - vii. changing river patterns and extreme events threaten fisheries and aquaculture;
  - viii. food transport and accessibility are affected by climate-related disasters causing loss of infrastructure and market disruptions; and
  - ix. the climate-related risks associated with climate variability and exacerbated food insecurity increase the overall risk of climate-related illness or death.
6. In forestry, climate change can have significant impacts depending on the geographic region and forest type. For example, in dryland forests in Africa and elsewhere, rising temperatures, higher evaporation, and lower rainfall will be reflected in reduced productivity, and losses related to fire, pests and diseases. In general, forest fire risk and pest and disease damage due to climate warming is predicted to increase worldwide.

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<sup>1</sup> For the purpose of this document agriculture sectors comprise crops, livestock, fisheries and aquaculture and forestry.

<sup>2</sup> Agriculture and food systems: For the purposes of this document, agriculture and food systems refer to all agricultural sectors (crops, livestock, fisheries and aquaculture, and forestry) and all stages along the food supply chain from production to consumption and disposal.

Scientists are increasingly concerned that forest and bush fires can emerge as an increasingly important source of CO<sub>2</sub> emissions making it more difficult to limit global warming.

7. Climate change is considered a threat multiplier on agriculture and food systems. The effects of climate change (higher temperatures, changing precipitation regimes, longer dry periods) often exacerbate existing threats in areas where terrestrial and aquatic ecosystems are already under stress from land degradation (including sealing by urban expansion), deforestation, or forest degradation, desertification or over-fishing. The same happens in situations where the threats on land use and food systems have a socioeconomic or political origin. For instance, in the case of conflicts about access to land or water, poorly developed infrastructure, inequality in land rights or even armed conflicts, the effects of climate change or climate-related disasters on land and water use, agriculture and food systems exacerbate the other problems.
8. The increased climate variability and extremes are negatively affecting all dimensions of food security (food availability, access, utilization, quality and stability). Safe food is a key dimension of food security and climate change has major implications for food safety, which in turn impacts public health, international trade, national economies and livelihoods. Food insecurity and related implications in terms of availability, accessibility and affordability of healthy and balanced diets are major contributors to the increased levels of different forms of malnutrition. This is greater today because livelihoods and livelihood assets, especially those of the poor are more exposed and vulnerable to changing climate and extremes, including the natural ecosystems and resources on which they directly depend to build the resilience (WMO, 2019).
9. Because of the impact on climate variability and extremes on food security, climate change is now among the key drivers behind the recent rises in global hunger and among the leading causes of severe food crises. After a decade of steady decline, hunger is on the rise again, linked to population pressure on limited resources and conflicts, and exacerbated by climate change – about 821 million people suffered from hunger in 2018. The situation is most severe in sub-Saharan Africa, where the number of undernourished people increased by more than 23 million between 2015 and 2018, particularly in conflict-affected countries. Among 33 countries affected by food crises in 2018, climate variability and weather extremes were a compounding driver together with economic shocks and conflict in 26 countries, and the leading driver in 12 of the 26 (FAO *et al*, 2018).
10. The effects of climate change on agriculture and food production are ultimately generating social impacts. Limited food availability, insecurity, climate-related natural disasters and the spreading of pests and disease lead to less income, loss of jobs, more hunger, declining health and to increased violation of human rights, more conflict and migration. As adaptive capacity is lower among the most vulnerable, climate change disproportionately affects the more vulnerable groups of society, including the disabled, poor, elders, youth, women, and people of diverse sexual and gender identities. Indigenous peoples are also heavily affected by climate change. The ultimate social impact of climate change through poor access to enough and healthy food, increasing health problems and increasing inequality between different groups in society, links climate change and human rights. Social impacts of climate change have been addressed extensively in reports of international agencies, also highlighting the human rights obligations of both governments and private actors in

responding to climate change, including those relating to adaptation and mitigation (UNEP, 2015).

### **Contribution of agriculture and food systems to climate change**

11. Natural and productive landscapes and seascapes are the main basis for human livelihoods and well-being, including the supply of food, rural income and multiple ecosystem services related to soils, water and biodiversity. At the same time, human use of land resources (soil, water, vegetation, biodiversity) directly influences over 70 percent of the global, ice-free land surface, and plays an important role in the climate system (IPCC, 2019). The energy used for ocean fisheries is estimated to make up 0.5 percent of global CO<sub>2</sub> emissions (Phys.org, 2019), but the overall impact of human use of seas and oceans on climate change is yet unknown. Population growth and an increase in per-capita consumption of resources (including food, fiber, fodder, wood products, energy) have put unprecedented pressure on land and fresh water use. Expansion of agriculture often into forest areas, unsustainable livestock, fisheries and unsustainable forest production activities to satisfy this growing demand have contributed to increasing net GHG emissions, loss and degradation of natural ecosystems such as forests, savannahs, grasslands and wetlands, and declining biodiversity (IPCC, 2019). Land degradation depletes soil-bound organic matter, forming another source of GHG emissions.
12. Forests act as the biggest terrestrial carbon sink, but at the same time are an important source of CO<sub>2</sub> emissions due to deforestation and forest degradation caused primarily by crop and livestock expansion. Livestock is one of the major contributors to GHG emissions, not only because of its link to deforestation, but primarily because of methane emissions originating from enteric fermentation. Unsustainable use of fuelwood and fossil fuel for food production is another major source of CO<sub>2</sub> emission, for instance combustion-engine groundwater pumps for irrigation, fishery fleets and food transport through land, water and air (Politico, 2018). Finally, food loss along the entire supply chain and food waste at the consumer level accounts for additional emissions, not only because of higher production costs per unit of food consumed, but also directly through GHG production in solid waste (FAO, 2013).

### **Agriculture, nature-based and food-related solutions for climate mitigation and adaptation**

13. Agriculture, food systems, land and water use offer multiple opportunities for climate action: There are many examples of synergies between mitigation and adaptation in the production system and along the value-chain. The various Intergovernmental Panel on Climate Change (IPCC) reports and the Paris Agreement have explicitly recognized land (natural ecosystems and soils) as well as oceans as an essential carbon storage and carbon sink. The potential of land-based carbon mitigation has been explored since the 1990s through afforestation under the Kyoto protocol (Nabuurs, G.J. *et al*, 2007), but took a much broader approach in 2005, with the development of REDD+ (Reducing emissions from deforestation and forest degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries). initiatives for carbon dioxide removal from the atmosphere by the world's coastal and ocean ecosystems by plant growth, algae and sedimentation, are included in the concept of "blue carbon".

14. Innovative climate-smart production systems and sustainable, low-carbon commodity value chains (in comparison to business-as-usual scenarios) are a central element in the landscape-based mitigation strategies and also in addressing climate change through more sustainable, consumption and production (link to SDG 12). Much GHG emission reduction can be obtained by improved livestock management by using less area, improved breeds, improved diets and grassland management. Improved management of cropland, and increased soil organic carbon content do not require land use change but can reduce demand for land conversion (IPCC, 2019). Use of renewable energy to replace fossil fuels in food production (including for irrigation) and food chains (including transport), as well as use of bioenergy and biofuels, can contribute to mitigation. There is potential to reduce food loss, improve post-harvest operations while generating more income for farmers. Inclusion of mitigation measures throughout the food chains is important for post-harvest stages in the climate change context (FAO, 2011a).

### **The 2030 Agenda for Sustainable Development, SDGs and the Paris Agreement: creating synergies**

15. In 2015, the UN General Assembly adopted the 2030 Agenda for Sustainable Development as a global plan of action for people, planet and prosperity (UN, 2015). This agenda includes the 17 strongly interlinked SDGs and its 169 targets (International Council for Science, 2017). SDG 13 (climate action) aims to strengthen resilience and adaptive capacity to climate-related hazards and natural disasters. Its second target is to integrate climate change measures into national policies, strategies and planning (FAO, 2018). Under SDG 13, the UN have defined five targets and eight indicators. Targets specify the goals, while indicators represent the metrics by which the world aims to track whether these targets are achieved.
  - i. The first target (13.1) focuses on adaptation but with a strong emphasis on resilience to climate-related and natural disasters.
  - ii. The second target (13.2) is about mainstreaming climate change in national policies and is measured by the communications on these policies through Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) etc.
  - iii. The third target (13.3) is on education, through inclusion of climate action in educational curricula. The two alphanumeric targets (13a and 13 b) are a direct reference to UNFCCC commitments on climate financing and support to Small Island Developing States (SIDS) and least developed countries (LDCs).
16. The Paris Agreement (2015) is a joint commitment of all parties under the UNFCCC to limit GHG emissions and enhance adaptation and climate finance. The preamble of the Paris Agreement makes specific reference to “safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change”. The Paris Agreement to combat climate change explicitly recognizes the importance of land use in the removal of GHG from the atmosphere, with particular emphasis given to the role of forests in maintaining and enhancing sinks and reservoirs of carbon. After adoption of the Paris Agreement, in 2017 agriculture (crops and livestock) was included within the UNFCCC framework in 2017 by adoption of the Koronivia Joint Work on Agriculture (KJWA) (FAO, 2019b).
17. Under the Paris Agreement, each country must determine, plan, and regularly report on the contribution that it plans to undertake to mitigate global warming. For planning and

reporting, each party must prepare, communicate and maintain successive NDCs to the worldwide goals. To guide implementation of its NDC processes, every country must present a climate action plan in five-yearly cycles. The Paris Agreement also states that parties shall, as appropriate, engage in the formulation and implementation of NAPs. NAPs have flexible processes for mid-/long-term planning and can report on adaptation efforts as part of or alongside other communications such as NDC.

18. Transparency is the backbone of the Paris Agreement. The Enhanced Transparency Framework (ETF) for action and support is a central component to the design, credibility and operation of the Paris Agreement. It specifies how parties to the agreement must report on progress in climate change mitigation and adaptation measures with focus on their progress in implementing their NDC targets and goals.
19. The adoption of the 2030 Agenda and the Paris Agreement in 2015 established a strong foundation for coherent implementation of climate action and sustainable development objectives across all levels and sectors. Climate change and sustainable development are inextricably connected. Furthermore, the Paris Agreement, just like the SDGs, acknowledges that parties should, when taking action to address climate change, respect, promote and consider their respective obligations (UNFCCC, 2015). Given this factual interrelationship between their designated international processes, the United Nations Department of Economic and Social Affairs (UNDESA) and the UNFCCC secretariat teamed up, in collaboration with other partners, to organize the Global Conference on Strengthening Synergies between the Paris Agreement and the 2030 Agenda for Sustainable Development (held in Copenhagen in 2019).<sup>3</sup> This was followed by the Global Consultations on Climate & SDG Synergies through a series of webinars in 2020.<sup>4</sup>

### **FAO and climate change and climate action**

20. FAO's Strategic Framework 2010-2019 introduced a new way of working at FAO, represented by a conceptual framework with cross-sectoral interdisciplinary approaches to interconnected challenges expressed by the SDGs and the Paris Agreement. The revised (2015-2019) Framework has five strategic objectives<sup>5</sup> and a sixth objective on technical quality, statistics and cross-cutting themes (climate change, gender, governance and nutrition) (FAO, 2017a). Being included as a cross-cutting theme in the Strategic Framework implies that climate change should be considered along and across all FAO's activities, programs and policies. Currently, FAO is engaged in an ongoing strategic thinking process that will lead to the formulation of a new Strategic Framework. Also, FAO initiated a strategic planning process for the future Office of Climate Change, Biodiversity and Environment (OCB). The results of this evaluation are intended to inform these processes.
21. In addition to being a cross-cutting theme, climate change is explicitly addressed under several strategic objectives of the Strategic Framework. Through the 2018-2021 Medium Term Plan under the Framework, FAO links its contributions to the SDGs per strategic

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<sup>3</sup> The second conference was planned for April 2020 but was postponed due to the coronavirus pandemic.

<sup>4</sup> A series of webinars were organized between 25 May–30 June 2020 to explore how to maximize SDG & climate co-benefits in Covid-19 recovery measures. Available at: <https://sustainabledevelopment.un.org/climate-sdgs-synergies2020>

<sup>5</sup> 1. Contribute to the eradication of hunger, food insecurity and malnutrition; 2: Increase and improve the provision of goods and services from agriculture, forestry and fisheries in a sustainable manner; 3: Reduce rural poverty; 4: Enable more inclusive and efficient agricultural and food systems; 5: Increase the resilience of livelihoods to threats and crises.

objective (SO) through all targets and indicators of SDG. This showed that three SOs contribute to SDG 13: SO2 (increase and improve the provision of goods and services from agriculture, forestry and fisheries in a sustainable manner); SO3 (reduce rural poverty) and SO5 (increase the resilience of livelihoods to threats and crises). Also, cross-cutting objective 6 (technical quality, knowledge and services) should ensure technical leadership and the integration of statistics and the cross-cutting issues of climate change, gender, governance, and nutrition in the design and delivery of the SOs.

22. FAO considers climate change a corporate priority. The need to address the challenges posed by climate change had acquired growing prominence for FAO since the turn of the century. Divisions and departments at FAO had begun to reflect on the meaning and implications of climate change adaptation and mitigation (CCAM) within their respective work areas. Dedicated programmes and initiatives emerged or reinforced and an Interdepartmental Working Group on Climate Change (IDWG-CC<sup>6</sup>) was established to systematize and consolidate FAO's work on adaptation and to mainstream climate change adaptation into all FAO development activities at national, regional and global levels. These developments are captured in the publication *FAO-Adapt: Framework Programme on Climate Change Adaptation*, FAO's comprehensive effort to address the imperatives of climate change (FAO, 2011b).
23. Following recommendations from the *Evaluation of FAO's Contribution to Climate Change* (FAO, 2015), considering the goals and aspirations of the 2030 Agenda for Sustainable Development and the targets set by the Paris Agreement of the UNFCCC, FAO started formulating its institutional Climate Change Strategy. This Strategy and a revised Action Plan Results Framework, with newly defined outcomes, outputs, indicators and preliminary targets, were adopted in 2017 (FAO, 2017b; 2017c). The Climate Change Strategy highlights FAO's central goal of supporting its Members in achieving their commitments to face climate change. It recognizes that agriculture and food systems are partly responsible for increased temperatures but are also a fundamental part of the solution to mitigate GHG emissions and promote adaptation to a changing climate. The Strategy seeks to integrate agriculture and food systems within the international climate agenda, and it recognizes the importance that agriculture, forestry, fisheries and food play under the NDC<sup>7</sup> and prioritizes providing support to countries on NDC formulation and implementation. The FAO Strategy on Climate Change also "considers gender-specific vulnerabilities and needs along with opportunities and capabilities with regard to climate change" and is implemented in the context of the *FAO Policy on Gender* (2013). FAO is currently reviewing the results under the FAO Strategy on Climate Change Action Plan Result Framework (FAO, 2020b).
24. In December 2016, FAO established a dedicated Climate and Environment Division (now part of OCB).<sup>8</sup> OCB coordinates FAO's delivery against the Climate Change Strategy. At the regional level, regional initiatives related to natural resources, climate change and disaster risk reduction have been established. OCB works to assist Members in policy development, planning and response towards the challenges of climate change. This includes the promotion of adaptive capacities and climate resilience, as well as the mitigation of climate change within agricultural sectors, and climate-related disaster risk reduction (DRR). CBC

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<sup>6</sup> Interdepartmental Working Group on Climate Change (IDWG-CC) has been inactive since mid-2016. NDC coordination group, which would comprise relevant teams, divisions and offices across the FAO, is in process of establishment.

<sup>7</sup> The Agriculture Sectors in the Intended Nationally Determined Contributions (2016).

<sup>8</sup> Graziano da Silva' mandates: 2011-2015 and 2015-2019.

facilitates FAO's internal coordination and quality enhancement of climate change work across the organization and its Strategic Programmes. OCB is also coordinating FAO's participation to the Conference of the Parties (COP) to UNFCCC and other relevant international fora on climate change. In 2017, the FAO-GEF coordination unit was integrated to OCB and now the Division also serves as the focal point for the Global Environment Facility (GEF), the Green Climate Fund (GCF) and the Adaptation Fund. In addition, together with Regional and Country Offices, OCB provides quality assurance for the development, management and implementation of project portfolios of these financial mechanisms at FAO.

25. FAO does not yet systematically mainstream the assessment and screening of climate change risks into its projects and programs. Also, climate risks and climate risk dimension of FAO's environmental and social standards (2015) are not reflected in the Climate Change Strategy. Seeking to overcome these shortcomings, OCB prepared a proposal to revise the guidance on climate change risk variables (standards) to be incorporated in the 2019-2020 review of the 2015 Environmental and Social Management Guidelines (ESMG). The proposal is currently under discussion.
26. FAO contributes to climate action through a range of activities. From data generation on forest covers to community support in healthy diets, from promoting sustainable food systems to mobilizing funding for Members and from safeguarding human rights to participation in global fora, all FAO's initiatives are linked to one or more SDGs. Appendix 1 provides a general overview of the nature of FAO's work in the realm of climate action. However, few of these initiatives can be linked directly to the relatively small set of SDG 13 indicators that are limited to impact of disasters and planning for DRR (13.1); policies, plans and strategies of countries for climate change and the total emission reductions (13.2) and improved education and financing for climate action (13.3). Most FAO initiatives contribute indirectly to one of these indicators, through their main focus on another SDG. For instance, where most food production and supply chain activities focus on SDG 2, when done sustainably, these contribute to the adaptive capacity to and the mitigation of climate change effects. Similarly, while mostly targeting forest conservation and sustainable forest land management (SDG 15), the REDD+ program has a direct focus on emissions reduction. During the preparation of this evaluation, a preliminary effort was done to map how FAO tools, projects, approaches and programs contribute to SDG 13 directly or indirectly, through other SDG targets.
27. As part of the preparation for this evaluation, an analysis was done of FAO's projects that initiated between 2015 and 2020. This analysis, presented in the concept note, shows that a minority of FAO's work is considered as directly related to SDG 13.<sup>9</sup> The share of projects relating exclusively to SDG 13 ("SDG 13 exclusive") is 1 percent of FAO's portfolio in terms of total budget. A much larger share (37 percent) contributes to other SDGs along with SDG 13 ("SDG 13+"; 12 percent) and to SDG 13 indirectly, through "SDG 13 possible effect" (contributing on targets of other SDG that contribute to climate action; 25 percent). This shows that the most FAO projects have climate goals in addition to other goals. The majority of FAO's budget (62 percent) is allocated to other SDGs that have no directly evident relationship with SDG 13. Here, it should be considered that the nature of the portfolio analysis might imply that climate-related elements not necessarily show up immediately in the results frameworks of many of FAO investments, even though climate

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<sup>9</sup> The full methodology of this portfolio analysis is included in the Evaluation Concept Note.

elements are present. The 103 projects targeting exclusively SDG 13 have explicit climate change contribution in their titles and objectives. In terms of numbers, majority of these projects (55 percent) are GEF and GCF funded projects related to readiness support and climate change adaptation.

28. A closer look at these projects shows that the majority are government cooperative programmes (62 percent), non-emergency projects (98 percent) and principally targeting Latin America, Asia and Africa (73 percent); the remainder is distributed among the regions Near East/Northern Africa and Europe/Central. Five percent of all projects are interregional (4.8 percent). The Office of Climate Change, Biodiversity and Environment (OCB), as lead technical unit (OCB), accounts for 31 percent of "SDG 13 exclusive" projects.

### **3. Theory of change**

29. The background of this evaluation shows a complex interaction of agriculture, food systems, land and water use - and therefore, all of FAO's work - with climate change. A straightforward assessment of how FAO contributes to SDG 13 targets and Paris Agreement indicators would not give due credit to all FAO's contribution to climate action and would not fully reflect the inclusion of climate change as a cross cutting theme in FAO's strategic framework. Therefore, during the preparation of this evaluation, a theory of change (TOC) was developed as an attempt at reconstituting the overall logic of the climate action undertaken by FAO that will be evaluated. It is meant to be dynamic in the sense that it is an interaction with other SDGs being pursued by both FAO and/or its partners. Please see Appendix 1 for the complete reference to the Theory of Change.

## 4. Purpose and objectives of the evaluation

30. This evaluation has the purpose to assess to what degree FAO's work has been generating effective climate action as a contribution to the SDG 13 targets and the commitments of the Paris Agreement. It is a theory-based evaluation, for which the reconstructed theory of change will be considered the underlying logic for FAO's contribution to climate action. This analysis of FAO's past and actual work will be instrumental to shape the future FAO interventions and therefore, in addition to the summative part, the evaluation will apply a strong formative lens to assess whether FAO is fit for purpose to meet the challenges set by the Paris Agreement and the global 2030 Agenda for Sustainable Development, what approaches in each of its institutional roles<sup>10</sup> have been effective and should be continued and upscaled and what should be modified for better impact.
31. Within this purpose, the specific objectives for this evaluation are to:
- i. Assess the relevance and effectiveness of FAO's program and project portfolio in support of SDG 13 and connected targets, considering as well the directly associated targets, tools and mechanisms under the Paris Agreement.
  - ii. Assess the institutional capacities, processes and programming of FAO (at all levels from headquarters/Regional/Sub-regional Offices and Country Offices) to operate transformational change that effectively contributes (directly or through other SDGs to the targets of SDG 13, the Paris Agreement and associated international commitments (including the principle of "leaving no one behind").
  - iii. Assess the relevance and effectiveness of FAO's partnerships (including within the UN system, other development organizations, climate change-related global initiatives, research organizations, civil society, private sector, regional partners, through SSTC, etc.) to enhance impact, building on its own competitive strength and institutional niche.
  - iv. Recommend improvements of the Climate Change Strategy, its Action Plan and current Results Framework to optimally support SDG 13 and the Paris Agreement, based on an assessment of the effectiveness and (emerging) impact of FAO's Climate Change Strategy.
  - v. Serve as an institutional baseline for future assessments pertaining to SDGs implementation, including mid-term reviews and final evaluations.

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<sup>10</sup> Policy advisory, assistance to food producers, farmer organizations, traders, schools, governance and institutional development, mobilization of resources, promotion of STTC, data collection, analysis, knowledge management and communication.

## 5. Scope of the evaluation

32. This evaluation will assess FAO's work in Climate Change from January 2015 to January 2020 (interventions started before 2015 but ending in 2015-2020 are also covered). This period is chosen because the evaluation builds on a previous evaluation that assessed FAO's intervention in Climate Change from 2010 until 2015<sup>11</sup>. The evaluation will cover all FAO's efforts in supporting both developing and developed countries to set and achieve their SDG 13 targets, building on FAO's Strategic Framework, programmes, and roles and typologies. Due to the interconnected and indivisible nature of the 2030 Agenda, the evaluation will also examine FAO's efforts in supporting targets that are directly linked to SDG 13. The SDG 13 evaluation will attempt to treat synergies and trade-offs in relation to SDG 13 targets as part of its scope, to the extent possible. It will map areas of FAO's SDG 13-related work, assess the delivered results of that work and the effectiveness of the delivery modalities. Given the cross-cutting character of CCAM, the evaluation will also assess the organizational ability to mainstream climate change by analyzing how all of FAO's work, not only SDG 13-related, include and implement concepts of CCAM.
33. Because of the broadness of the theme and the relatively young institutional strategy and portfolio on climate action, the evaluation will be change focused rather than impact focused. Following the reconstructed TOC, the evaluation will assess the contribution of FAO to the expected outcomes related to SDG13 and the Paris Agreement and it will assess how FAO, in partnership with Members and with other development agencies, effectively employ the levers needed for transformational change towards the generation of impact. The assessment of the actual impact is not within the scope of the evaluation but the evaluation will be able to suggest areas where impact assessment can be done in the future, for instance in the context of evaluations of other SDG.
34. Given the complex, indivisible and interconnected character of the 2030 Agenda, the evaluation of a single goal would be an almost artificial exercise if not connected to a sound methodological approach addressing complexity. This Evaluation is addressing this complexity by breaking down FAO's support into more evaluable pieces: i) according to levels of support (global, regional, national, local), and ii) according to the types of roles that FAO is expected to play (e.g. policy dialogue, planning, monitoring, piloting; at various levels). FAO sources for this typology of roles were identified by the SDG 2+ Evaluation based on the modes of delivery of Strategic Programmes, and will be applied to this evaluation to structure evaluation questions, data collection and analysis, and evaluation reports. The evaluation will therefore refer to the following reviewed definition of FAO roles:
- i. Policy advisory, policy dialogue, advocacy (including local adaptation of SDG targets).
  - ii. Unpack the actors in the value chain by giving prominence also to small and medium-sized enterprises (SMEs)/Food processors, retailers, consumers.
  - iii. Assistance to food producers, farmer organizations, traders, schools, etc.
  - iv. Support to institutional development, governance, coordination and planning.
  - v. Mobilization of public and private resources, investment support, promotion of SSTC.
  - vi. Data collection and analysis, roll-out and use of indicators to monitor progress.

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<sup>11</sup> FAO. 2015. Evaluation of FAO's contribution to Climate Change Adaptation and Mitigation. Rome. Available at: <http://www.fao.org/3/a-bd903e.pdf>

- vii. Knowledge management, communication, dissemination of good practices.
  - viii. Role of FAO in brokering public-private sector partnerships and in collaborating with civil society organizations, non-governmental organizations (NGOs), private sector (especially SMEs).
  - ix. Participatory innovation in agriculture and food systems.
35. OED has conducted the SDG 2+ Evaluation and other thematic and strategic evaluations,<sup>12</sup> and will launch the evaluations of other SDGs. Given the risk for overlap and opportunities for cross-fertilization between the various evaluations, the SDG 13 evaluation team is working in close collaboration with the other teams to explore synergies. Also, the review of the FAO Strategy on Climate Change will constitute important input into this evaluation, and despite its more limited scope should provide important inputs to the evaluation summative component.
36. The SDG 13 Evaluation will assess all FAO contributions to climate action as well as trade-offs from other FAO work with climate action and therefore, it has to cover the entire extent of FAO's work, at all levels (global, regional, country). It is practically impossible, and strategically not desirable, to cover all FAO work in detail. The ET has applied several tools to limit the scope of work so to include a representative part of the portfolio by (a) focusing on eight of the thematic areas of FAO's work in climate change, i.e. those FAO initiatives most directly related to climate change; (b) limiting the amount of interactions with other SDG targets. For contextualization purposes, the evaluation will address SDG 13 through SDG 1, 2, 6, 12, 14 and 15. For in-depth study the evaluation will focus on specific targets under these SDG (see section on methodology, component 2); (c) selecting activities in regions and countries where signature projects are particularly relevant and cover FAO's geographical range by concentrating on different countries per deliverable rather than concentrating on a few countries.

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<sup>12</sup> *Evaluation of the FAO Strategy for Partnerships with Civil Society Organizations*; Evaluation of the Humanitarian-Development-Peace-Nexus.

## 6. Evaluation questions

37. To meet the evaluation objective, the following evaluation questions have been formulated. For each question, a set of sub-questions will guide data collection and analysis as well as report writing. Table 1 provides an evaluation matrix, that includes detailed sub-questions and explains how the evaluation products (presented in next section) and indicators help to respond to them.
- i. Is FAO **making a relevant and effective contribution** to globally agreed climate action targets?
  - ii. Is FAO **fit for purpose** to significantly contribute to globally agreed climate action targets?
  - iii. Does FAO optimally **engage partnerships** that leverage the effect of its work on climate action towards impact generation?

## 7. Methodology

### General approach

38. The SDG 13 Evaluation will have a summative and a formative aspect. The summative aspect will assess the results achieved by FAO so far, including but not limited to those under the FAO Climate Change Action Plan Results Framework, and identify the factors for success or areas for improvement. Based on that, the evaluation builds its formative aspect: it will provide recommendations for the design of a future scenario for FAO's work related to CCAM and for eventual adjustments in the FAO Strategy on Climate Change to better serve its purpose. The aim of being forward looking, which implies developing recommendations for FAO's work, structure and partnerships, in combination with the complexity of the evaluation calls for a participatory process. Participatory exercises, involving the staff of the different FAO divisions, offices, centers and decentralized offices, and naturally government partners, beneficiary population as well as external global and regional partners and stakeholders are envisioned as part of the evaluation implementation.
39. Apart from climate change, governance, gender and nutrition are other cross-cutting themes in FAO's strategic framework (and as such included in its Objective 6) and will be considered in the current evaluation. All components and elements of this evaluation will include the three other cross-cutting elements. Also, following the basic goal of the Agenda 2030 of "leaving no one behind", gender equity and human rights in general are considered throughout the evaluation. Given the areas of work of FAO, there is a particular relevant relationship with indigenous peoples and their rights, which will be addressed.
40. The TOC is the theoretical basis for the evaluation. Activities under control of FAO, mostly through the implementation of projects, generate the expected outcomes of the TOC. For the transition from outcomes to impact (low-carbon development and climate-resilient development), transformational changes are needed. While there are many different interpretations of transformational change, we adopt the World Bank and GEF/GCF definition of transformational change as *"...relevant engagements that help achieve deep, systemic, and sustainable change with large-scale impact in an area of global and national environmental concern"*. In the TOC for this evaluation, transformational change implies changes that go beyond the level or scale of the outcomes. So for the sake of this evaluation, we consider transformational change as changes (in status, behavior, capacities) in society, economy or environment at a significantly higher level, scale or magnitude than at outcome level. These changes should be sustained by effectively implemented and enforced positive public policies, effective and efficient institutional structures, secured public and private investments and enabling (social and institutional) networks. Therefore, where the expected outcomes of the TOC are mostly generated by projects and are under control of FAO, the transformational change and hence, the final impact, is beyond FAO control and can only be generated through in partnership with Members, other development partners, academy and donors.
41. The SDG 13 Evaluation focuses on the capacity of FAO to operate transformational change that effectively contributes to the impacts in climate action. The steps in the TOC from outcomes to impact via transformational change, require mainstreaming of the FAO goals and priorities on climate change within the institution, so all elements of FAO (organizational and results structure, project portfolio, actions) contribute to or at least,

should not have negative impact on climate action. Also, because transformational change is mostly beyond the control of individual projects, it requires a good coordination and alignment of FAO's projects in national plans and institutional strategies. Finally, effective delivery of FAO's normative activities, policy advisory, institutional development and networking is needed to ensure entry points to sustainability (governance, legislation, funding, collaboration) are enabled. This evaluation will focus on the achievement of outcomes in the TOC and will identify interventions that have transformational potential, assessing the elements of transformation (scale, level, magnitude, capacity and political, institutional, social and financial sustainability), their position in FAO's programming (country and regional programs and institutional strategies) and partnerships to mobilize this transformational potential.

## Components and elements

42. The evaluation process has three major components: (1) setting the stage (inception), (2) assessment of performance (summative) and (3) structure, strategies and partnerships for transformative change (formative). These components are not fully distinct but strongly interrelated: many elements of the first component are inputs for the second and third components and the third component builds strongly on the results of the second component.
43. **Component 1: Setting the stage.** This component provides basis for the evaluation. It will help to understand in detail what FAO has done and is currently doing in the area of climate change. Therefore, it will analyze how climate change is included in FAO's institutional structure, its strategies, delivery modes and in decision-making. It will map FAO's portfolio in the area of climate action and will analyze how the work of FAO is related to SDG 13 and Paris Agreement goals, either directly or through targeting other SDGs. Finally, it will carry out an initial assessment of the potential trade-offs of other FAO work with climate change mitigation or adaptation, to be further developed and detailed during the other components of the evaluation. Under this component the SDG 13 will carry out desk reviews, meta-evaluations and scoping studies leading to a better definition of the FAO portfolio in climate change, to the identification of synergies and trade-offs across areas of FAO's work and to the evaluability of some of the SDG 13 related interventions.
44. Elements (deliverables) of component 1 include:
  - 1.1. An outline of FAO's resources (organizational structure, governance structure, human capacities, institutional policies) related to climate action. This will complement the scoping work done during evaluation preparation, and builds on a similar analysis by the SDG 2+ Evaluation and by the review of FAO Strategy on Climate Change.
  - 1.2. A mapping of FAO's portfolio and its contribution to SDG 13 and related targets in other SDG.
  - 1.3. An assessment of the interrelation of the work of FAO with SDG 13 and other SDG mapping synergies and trade-offs.
  - 1.4. REDD+/UN REDD scoping study.
  - 1.5. Meta-analysis of OED climate change-related evaluations.
  - 1.6. Meta-analysis of GEF evaluations.

- 1.7. An overview of the contribution of international development partners to SDG 13 (UN agencies, international financing institutions, bilateral cooperation agencies and research institutes).
45. **Component 2: Assessment of performance.** This component will analyze the relevance and effectiveness of FAO's ongoing work in support of climate action (EQ1). It will consider FAO's direct contributions to climate action as well as FAO's work that is not directly related to climate action, assessing the extent to which climate change considerations were addressed through risk analysis and mitigation. This will include the recognition of potential trade-offs of FAO work with climate action. Finally, it will specifically assess the normative outputs of FAO (databases, policy support, standards and regulations for legislation etc.).
  46. Elements of the component 1 (portfolio analysis, SDG interactions, meta-analysis) provide inputs into the performance analysis. Another fundamental element of the performance assessment is the Review of the FAO Strategy on Climate Change, entailing a summative analysis of deliverables against the Strategy and adequacy of its design and structure. . While this addresses only part of FAO's work on climate action, this analysis will be a key input into the formative component of this evaluation. Because a complete assessment of all activities of FAO will be impossible and could lead to a superficial analysis of FAO's work, the ET selected a number of key products and services relevant to SDG 13 and closely associated with FAO.
  47. This evaluation will focus mainly on activities that contribute directly to SDG 13 targets or to other SDG targets that contribute to climate action and therefore, indirectly to SDG 13. Based on the CDE-University of Bern analysis of interactions of different SDGs with SDG 13 (component 1), most synergies were identified in the following targets: SDG 1 (zero poverty; target 1.5), SDG 2 (zero hunger, Target 2.4), SDG 6 (water, target 6.6), SDG 12 (sustainable production and consumption; targets 12.2 and 12.3), SDG 14 (Life below water; Targets 14.2, 14.4, 14.5 and 14.7) and SDG 15 (life on land; targets 15.1, 15.2, 15.3, 15.4, 15.5, 15.9, 15a and 15b). The evaluation will address some of these targets for their relation with climate action, but the full assessment of their performance will take place under future evaluations on the respective SDG.
  48. Because the evaluation cannot fully assess the entire FAO portfolio, a number of key thematic areas relevant to SDG 13+ and closely associated with FAO will be sampled and reviewed to assess how they contribute to SDG 13+. The final thematic areas of FAO's work in climate change will be selected with the help of the FAO Reference Group, and preliminary include:
    - i. Climate Change in the Fisheries and Aquaculture Sector.
    - ii. Forest carbon (REDD+)-related programmes/projects.
    - iii. Climate-smart agriculture.
    - iv. Climate-smart livestock management.
    - v. Disaster Risk Reduction and/or Management.
    - vi. Mitigation of Climate Change in Agriculture (MICCA)/Monitoring and Assessment of GHG Emissions and Mitigation Potentials in Agriculture (MAGHG) (including meta-analysis of past evaluations).

- vii. Land restoration and prevention of desertification.
  - viii. NAP and NDC related projects/ programmes.
  - ix. Food systems-food waste.
  - x. Mobilizing climate financing (Investment Centre).
  - xi. Gender and climate change.
49. Within each of the thematic areas of FAO's work in climate change, there is a suite of projects funded by different sources, implemented by a variety of divisions, decentralized offices and in collaboration with a series of partners. The input from the first component (scoping study of REDD+, meta assessment of GEF and climate projects) will help to select those initiatives that will be studied in detail. Therefore, the signature projects are being analyzed across the entire organization, considering the different delivery models and considering normative and operative outputs. Among delivery models, specific attention will be paid to identify examples of areas, initiatives and partnerships with high potential for transformational change, and the contribution of FAO *vis-à-vis* other development partners. These examples will then be analyzed in detail through country visits, interviews, and document revisions. It will assess how they are inserted in FAO's programming (country and regional programs and institutional strategies) and partnerships to mobilize this transformational potential.
50. Studies carried out under component 1 (portfolio analysis) will be the basis to identify a sample of projects with no direct relationship with climate change and potential positive or negative trade-offs. These will be products (to be defined) most probably related to doubling agricultural production for zero hunger (target 2.3) and promoting development-oriented policies that support productive activities for economic growth (target 8.3). A desk study on climate change risk analysis will be undertaken on these selected products. Subsequently, an assessment of likelihood of negative or positive impact on climate change through direct observation and interviews as part of the evaluation process will take place.
51. Elements (deliverables) of this component include:
- 2.1. Assessment of relevance and effectiveness of thematic areas of FAO's work in climate change (see paragraph 52 above). This will be done both on normative and operative outputs, at country, regional and global level, with specific attention to Small Island Developing States (SIDS), least developed countries (LDCs) and landlocked developing countries (LLDCs). This will include (a) identification of projects/programs within the thematic areas of FAO's work in climate change; (b) visits (virtual, and/or with national consultants) to country/regional/global office; (c) geospatial mapping of Carbon Action related projects (when possible); (d) assessment of contribution to TOC (potential or actual) through examples of interventions that have transformational potential, and (e) effectiveness of delivery models (normative, operative) to generate transformational change beyond the individual project outcomes. The relevant regions and countries will be identified according to the major activity of the particular signature product, considering that among all products, the geographical range of FAO should be represented and too much overlap should be avoided.
  - 2.2. A global survey among FAO staff, staff of institutions that partnered with FAO initiatives, government agencies and other development agencies about the perception of

the main contributions of FAO to climate action, most effective delivery models, main challenges and gaps.

2.3. Identification of the degree and effectiveness of mainstreaming climate change in areas of identified trade-off (actual identification of trade-offs, identification of climate risk). This will include (a) an assessment of the FAO standards, guidelines or strategies for mainstreaming climate change in its activities; (b) a quantitative analysis of climate change considerations in the wider (not SDG13) related portfolio; (c) in-depth analysis of two signature projects that likely present major trade-offs or actual potential negative impact and how these trade-offs with climate action are being identified and managed.

2.4. Review of the FAO Strategy on Climate Change, assessing results achieved and providing recommendations for its contribution to SDG 13 and the 2030 Global Agenda in the context of the new FAO review.

52. **Component 3. Structure, strategies and partnerships for transformative change.** This component will assess if FAO's institutional structure and strategies are fit for purpose for transformational change (EQ2); as well as its niche and added value to increase its contribution to climate action in the future, in relation to country support and as actor in the global climate change arena. This should lead to recommendations on the formulation of a new corporate narrative on climate change. It will be based on two elements of component 1: the blueprint of the institutional structure delivering on climate action and the overview of work of development partners and the institutional niche of FAO. This component will specifically identify the factors that determine the potential for transformational change (relevance, delivery model, partnerships) and how these can be strengthened or mainstreamed in processes, initiatives and partnerships that FAO is leading, participating in or could join. The purpose is to provide informed recommendations, based on the other components of the evaluation, on how to achieve this through FAO's processes and delivery models, through current and future operative Climate Change Strategy and through effective and efficient collaboration with Members and other development partners.

53. Elements (deliverables) of this component include:

3.1. A mapping of main actors in the climate change arena, elaborated with contributions of other agencies, to identify FAO's institutional niche vis-à-vis other development partners.

3.2. Identification of successful cases of FAO assistance to Members to the leveraging resources, policies or new initiatives at country/regional level (extracted from component 2).

3.3. Assessment of areas with highest potential for transformational change and of partners (both international development partners as well as private sector, academy and financing partners) to create synergy for the consolidation and sustainability of transformational change.

3.4. Development of overall recommendations for processes and delivery models; future operative strategy and collaboration with Members and other development partners. Recommendations will be developed by ET and discussed/validated with different key divisions/stakeholders within FAO through a series of workshops.

#### **Data gathering and information analysis**

54. The deliverables to be produced by three components will require the following data gathering and information processing methods:

- i. Portfolio analysis. As a basic step for this evaluation, the entire portfolio of FAO should be mapped against its contribution to SDG 13 (directly or through other SDGs). This work was initiated during inception which helped to categorize FAO's initiatives in four groups. During the evaluation, further mapping will be done along the signature projects and the synergies/trade-offs between SDG.
- ii. Quantitative content analysis. Several elements of this evaluation are based on project documents and evaluation reports of recent and ongoing projects. During initial scoping of these documents that started during the inception phase and will be continued for Component 1, it was shown that the volume of documents is large (several hundreds) but holds highly relevant information for the evaluation questions. To process this large volume of documents, quantitative content analysis will be undertaken to scope particular themes and results. This will help to select relevant documents (among project design documents, project results and evaluations) that are particularly relevant to the evaluation questions and will be examined in detail.
- iii. Desk-review of relevant background materials. This will include both internal FAO documents (many key project documents identified through quantitative content analysis) and relevant publications by FAO and others. It includes, but is not restricted to FAO strategy documents; project and program descriptions; reports and evaluations; policy papers, technical papers, tools, statistical products, news stories and opinion pieces.
- iv. Interviews with FAO and non-FAO stakeholders at the global, regional, country and local levels. Interviews will be semi structured to ensure the relationship with the evaluation questions but allowing for interviewees to speak freely on any related issue. The different elements of the methodology require inputs from a large group of people. Several of these will be informants for different elements. Therefore, a long list of people to be interviewed will be set up by the ET and for each element, resource persons will be selected. Care will be taken to have regional, gender and ethnic balance among the interviewees. Data gathering should ensure the involvement of women, rural, indigenous peoples and other specific vulnerable groups and assess differential results on those groups with due consideration to gender and age.
- v. Country/regional visits (virtual, or through in-country consultants) will be organized according to the relevance of FAO's work in climate change in the country. These visits are a crucial step in the evaluation, to assess at country or regional level if the initiatives (projects) of different signature projects collaborate and align with country/regional programs of FAO and with policies and strategies of Members and other development partners. The criteria for country selection include:
  - Representativeness for the situation of climate change in the region.
  - Regional balance.
  - Balance in terms of degree of economic development.
  - Presence of initiatives (projects) of different thematic areas of FAO's work in climate change.
  - Participation in regional initiatives.
  - Presence of climate action initiatives by other development partners.
  - Coincidence with SDG 2 evaluation.

- Feasibility to include transversal themes (gender, indigenous peoples, human rights).
  - Availability of in-country consultants.
- vi. For each “signature product” tentatively, at least two regions and four countries will be analysed. While the geographical range of FAO’s work should be covered, countries where initiatives contributing to more than one signature product are present will be preferred to assess how individual projects in different areas or work (e.g. forestry, fisheries and crops production) are aligned in national programs. It is expected that a total of 12 countries will be visited (three for each of the regions Asia, Africa and Latin America and the Caribbean; one in European Union/Central Asia and 1 in Near East and North Africa). In-country assessments will be done with support of local consultants. Also, work at regional level will be assessed through assessment of signature projects managed by the regional offices.
- vii. Quantitative data gathering: theory-based process evaluations such as this, typically generate much qualitative information (narrative examples, opinions, perceptions). However, quantitative information can sustain findings stronger. Therefore, specific studies can be done to find quantitative data or to transform qualitative information in quantitative variables (number or examples, percentage of people with certain perception). Quantitative data will be contextualised to assess durability of results: for example, reduction of GHG emissions; area of restored land combined with sustainability of mitigation/adaptation interventions.
- viii. A global survey will be held among FAO staff, Members, other development agencies and project beneficiaries about the perception on the main contributions of FAO to climate action, most effective delivery models, main challenges and gaps. This survey will provide general information of FAO’s work and will be developed based on key questions of the evaluation matrix. In addition, for specific elements of the evaluation, online surveys and questionnaires will be sent out. This will be particularly helpful to increase the volume of response for specific questions such as examples of good practice, lessons learnt or the familiarity and use of FAO’s normative products.
- ix. Stakeholder consultations through workshops (face-to-face and/or online). Several elements of the evaluation, particularly during the formative stage, need an interactive process with key stakeholders within and outside FAO. A series of facilitated workshops will be organized to discuss these issues and validate the proposals and recommendations.
- x. Information processing: All information (from interviews, data gathering, background information, country visits) will be labelled, associated to the deliverables and evaluation questions. In case the information is contradictory, this will be triangulated or validated with third persons to assess if more consensus can be attained. If after validation the information continues to be contradictory, it will be presented as such.
- xi. Findings for deliverables of component 2 and 3: Each team member will develop findings based on the relevant processed information. These findings will be developed along the evaluation questions per deliverable, ensuring a smooth integration of the different deliverables. As a group, the ET will assess the different deliverables to ensure cross-examination and harmonization. The evaluation manager and the technical lead will oversee integration process.

## 8. Implementation and time frame (tentative)

55. The evaluation will develop an inception report for field work including plans for in country data collection and stakeholder mapping. The data gathering with the assessment of FAO's resources (deliverable 1.1), the synergies and trade-offs between SDG 13 and other SDG mapping synergies and the contributions of FAO and other agencies (deliverables 1.3 and 3.1). Also, the complete portfolio analysis and quantitative analysis of the different projects and initiatives within the signature projects (deliverables 1.2, 1.4, 1.5 and 1.6) will be started. Together with the members of the ET responsible for each signature project, a selection will be made of relevant documentation (project documents, products and/or evaluation reports) for detailed analysis of relevance and effectiveness (deliverables 2.1, 2.2). Also, the ongoing review of the FAO climate change strategy will be assessed by the ET for findings that contribute to the evaluation questions of this evaluation (deliverable 2.4).
56. Based on the first group of deliverables, theories will be developed to be tested, by each ET member, during interviews with FAO and non-FAO stakeholders at different levels (national, regional, global). The ET members will coordinate with in-country consultants to define people to be interviewed and questions to be asked in particular countries (note that in each country, different signature projects will be assessed) to assess how different initiatives align with country and regional programs and with national policies and strategies of other development partners. This will generate lists of (particularly positive or challenging) examples of transformational change, effective partnerships, leverage of resources or initiatives and (early) generation of impact (deliverable 3.2, 3.3). In parallel, a global survey will be designed by the ET and sent out to the global FAO network (deliverable 2.2).
57. Once data gathering through surveys, document review and country (virtual) visits are completed, the ET as a group will develop early findings that contribute to responding the Evaluation Questions and recommendations for processes and delivery models; future operative strategy and collaboration with Members and other development partners (deliverable 3.4). These will be validated through stakeholder workshops and bilateral meetings with FAO staff and key other resource people. After this, one single overall report will be written, with specific annexes that present the different evaluation products.

<b>General activity</b>	<b>Time period (estimated)</b>
Concept note development	March-May
Terms of reference development	May-June
Mapping of FAO and other contributions to SDG 13 (main actors in climate change arena)	April-July
Preliminary meta-analysis of projects	April-June
Detailed quantitative-analysis of projects	July
Document review	July-August
Assessment of FAO climate change strategy	August-September
Mapping of FAO resources	August-September
Interviews (FAO staff and other stakeholders)	August-September
Country-region (virtual) visits	August-September
Global Survey	August-September
Data processing and initial findings	September-October
Validation meetings and workshop	October-November
Elaboration of report	October-December

## 9. Limitations

58. The evaluation design phase is being carried out during the pandemic crisis of COVID-19. This will limit the capacity of this evaluation to carry out field visits as planned and is pushing the OED team to set in place innovative ways of consultation, such as remote stakeholder workshops. It is anticipated that all local and regional visits have to be done by remote means, eventually including local informants. Also, online workshops can be organized. Considering the pace of reduction of COVID-19 measures in Europe, coordination meetings or workshops in Rome might be considered possibly starting September 2020.
59. During the preparation of this evaluation it proved difficult to identify all work of FAO in relation to climate change and SDG 13. Not all projects or initiatives falling under the evaluation scope, are properly categorized as climate change-related for several reasons: i) systematic tagging of climate change related initiatives is not following any systematic guidelines by FAO. Since FAO still lacks a systematic and comprehensive tagging of climate change related initiatives the evaluation carried out its own mapping based on title and keywords, with the risk that some initiatives are overseen and the need to do a quality control of the tagging ii) tagging in the Field Programme Management Information System (FPMIS) was introduced in 2019 and tagging (including quality control) is not yet done for all activities of the period 2015-2020; iii) initiatives are climate change related, but influence through other SDGs (such as SDG 15 or SDG 12); iv) the relation to climate change is not immediately evident but present anyhow (for instance, the initiatives along the food chain or related to food-waste).
60. The evaluation assesses the period from 2015 to 2020. Much of FAO's portfolio that was developed during that period is only just starting. For instance, the 7th replenishment period of GEF funds many FAO projects on climate change, but most of them are just starting or in their first one or two years of implementation. The same is true for most GCF funds. This young portfolio does not allow for many observations on effectiveness or early impact. However, the ET considers that for the sake of this evaluation it is key to include the ongoing work and therefore, also the recently started initiatives will be considered and assessed according to their relevance to climate action, the FAO Strategy on Climate Change and the reconstructed TOC.
61. A considerable portion of FAO's work is related to DRR. Also, there will a specific office in FAO's structure dedicated to emergencies and resilience. The work on DRR is in line with target 13.1. and 2.4. Many climate-related disasters are evidently short term effects of climate change, such as floods, extreme drought or intense hurricanes. However, the work on DRR is broader than only climate change, because it also covers other natural disasters (seismic and volcanic) or human-induced emergencies. This evaluation will not cover those. Finally, there is a group of natural disasters that may or may not be climate-change related, such as locust plagues or disease outbreaks. For the sake of feasibility, the evaluation will consider only direct climate-related DRR and not cover indirectly (potentially) related emergencies.

## **10. Governance, management and quality assurance**

62. The evaluation will be led by OED and conducted by a multidisciplinary team of evaluators. The OED ET consists of Luisa Belli, Evaluation Manager, Ekaterina Dorodnykh, Evaluation Analyst, Emilia Bretan, Evaluation Specialist. The external consultants are Robert Hofstede (lead technical consultant, climate change and agriculture), Elham Seyedsayamdost (evaluation specialist on SDGs), Marko Katila (evaluation specialist on REDD, forestry and climate financing), Venkatesh Salagrama (evaluation specialist on fisheries and aquaculture); Adeline Sibanda (evaluation specialist on gender and social inclusion); Mohamed Ismail (evaluation specialist on livestock and pastoralism). The DRR specialist at the time of these TORs is being identified. The evaluation is advised by Alain Lafontaine (overall advise and peer review of main deliverables); Yugratna Srivastava (Advisor on Youth) and Mariam Wallet Med Aboubakrine (Advisor on Indigenous Peoples).
63. FAO evaluation or/climate change focal points, identified within their divisions, provide comments to evaluation deliverables

## Bibliography

- FAO, International Fund for Agricultural Development (IFAD), United Nations International Children's Emergency Fund (UNICEF), World Food Programme (WFP) and World Health Organization (WHO).** 2018. *The State of Food Security and Nutrition in the World 2018. Building climate resilience for food security and nutrition*. Rome, FAO. (also available at: <http://www.fao.org/3/I9553EN/i9553en.pdf>).
- FAO.** 2011a. *Energy-Smart Food For People And Climate. Issue Paper*. FAO, Rome. (also available at: <http://www.fao.org/3/a-i2454e.pdf>).
- FAO.** 2011b. *FAO-Adapt: Framework Programme on Climate Change Adaptation*. Rome. (also available at: <http://www.fao.org/3/a-i2316e.pdf>).
- FAO.** 2013. *Food Wastage Footprint Impacts on Natural Resources*. FAO, Rome. (also available at: <https://www.climatecentral.org/news/food-waste-worsens-greenhouse-gas-emissions-fao-16498>).
- FAO.** 2015. *Evaluation of FAO's Contribution to Climate Change Adaptation and Mitigation*. p. 2. Rome. (also available at: <http://www.fao.org/3/a-bd903e.pdf>).
- FAO.** 2017a. *Reviewed Strategic Framework. FAO Conference 40th Session*. Rome, 3 - 8 July 2017. (also available at: <http://www.fao.org/3/a-ms431reve.pdf>).
- FAO.** 2017b. *FAO Strategy on Climate Change*. Rome. (also available at: <http://www.fao.org/3/a-i7175e.pdf>).
- FAO.** 2017c. *Report of the 122nd Session of the Programme Committee (Rome, 6 – 10 November 2017)*. Rome. (also available at: <http://www.fao.org/3/mu632en/mu632en.pdf>).
- FAO.** 2018. *World Livestock: Transforming the livestock sector through the Sustainable Development Goals*. Rome. (also available at: <http://www.fao.org/3/CA1201EN/ca1201en.pdf>).
- FAO.** 2019a. *Report of the 127th Session of the Programme Committee (Rome, 4 – 8 November 2019)*. FAO, Rome. (also available at: <http://www.fao.org/3/na582en/na582en.pdf>).
- FAO.** 2019b. *State of The Koronivia Joint Work on Agriculture: Boosting Koronivia*. Rome. (also available at: <http://www.fao.org/climate-change/our-work/what-we-do/koronivia/koroniviafaqs/en/>).
- FAO.** 2020a. *Evaluation of FAO's support to Zero Hunger (SDG 2)*. Rome. (also available at: <http://www.fao.org/3/nc852en/nc852en.pdf>).
- FAO.** 2020b. *Programme Implementation Report 2018-19*. Rome. (also available at: <http://www.fao.org/3/nc390en/nc390en.pdf>).
- International Council for Science.** 2017. *A Guide to SDGs Interactions: From Science to Implementation*. (also available at: <https://council.science/wp-content/uploads/2017/05/SDGs-Guide-to-Interactions.pdf>).
- IPCC.** 2019. *An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. Summary for Policymakers*. (also available at: <https://www.ipcc.ch/srccl/>).
- Nabuurs, G.J., O. Masera, K. Andrasko, P. Benitez-Ponce, R. Boer, M. Dutschke, E. Elsidig, J. Ford-Robertson, P. Frumhoff, T. Karjalainen, O. Krankina, W.A. Kurz, M. Matsumoto, W. Oyhantcabal, N.H.** 2007. Forestry. In: *Climate Change 2007: Mitigation. Contribution of Working*

*Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. (also available at: <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg3-chapter9-1.pdf>).

**Phys.org**. 2019. *Carbon dioxide emissions from global fisheries larger than previously thought* [web article]. In: *Phys.org* [website]. Accessed at: <https://phys.org/news/2019-01-carbon-dioxide-emissions-global-fisheries.html>

**Politico**. 2018. *How EU milk is sinking Africa's farmers*. [web article]. In: *Politico* [online]. Accessed at: <https://www.politico.eu/article/eus-milk-scramble-for-africa/>

**Prosperi, P., Bloise, M., Tubiello, F.N, Conchedda, G., Rossi, S., Boschetti, L., Salvatore, M., Bernoux, M.** 2020. *New estimates of greenhouse gas emissions from biomass burning and peat fires using MODIS Collection 6 burned areas Climatic Change*. (also available at: <https://doi.org/10.1007/s10584-020-02654-0>).

**Ravindranath, M.J. Sanz Sanchez, X. Zhang.** 2007. *Forestry*. In: *Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. (also available at: <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg3-chapter9-1.pdf>).

**UN**. 2015. *Transforming our World: The 2030 Agenda for Sustainable Development*. A/RES/70/1. New York. (also available at: <https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>).

**UNEP**. 2015. *Climate Change and Human Rights*. (also available at: [https://web.law.columbia.edu/sites/default/files/microsites/climate-change/climate\\_change\\_and\\_human\\_rights.pdf](https://web.law.columbia.edu/sites/default/files/microsites/climate-change/climate_change_and_human_rights.pdf)).

**UNFCCC**. 2015. *Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015*. United Nations, Paris. (also available at: [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf)).

**World Business Council for Sustainable Development (WBCSD)**. 2020. *Our history* [web page]. In: *WBCSD* [online]. Accessed at: <https://www.wbcsd.org/Overview/Our-history>

**World Meteorological Organization (WMO)**. 2019. *The Global Climate in 2015–2019*. Geneva. Available at: [https://library.wmo.int/doc\\_num.php?explnum\\_id=9936](https://library.wmo.int/doc_num.php?explnum_id=9936)

## Appendix 1. Overview of FAO’s work on climate change (not exhaustive)<sup>13</sup>

Main areas of work	Activities	Examples of FAO Programmes and tools
Policy support and multi-stakeholder coordination	FAO supports the development of national climate plans and sustainable bioenergy policies, identifying mitigation and adaptation options and building resilient agriculture sectors and food production systems.	<ul style="list-style-type: none"> <li>• (Intended) Nationally Determined Contributions ((I)NDCs).</li> <li>• National Adaptation Plans (NAPs).<sup>14</sup></li> <li>• National REDD strategies.</li> <li>• Nationally Appropriate Mitigation Actions (NAMAs).<sup>15</sup></li> <li>• Support to regional bodies on NDCs implementation.</li> <li>• Bioenergy and Food Security (BEFS) Rapid Appraisal,<sup>16</sup> sustainable bioenergy indicators of the Global Bioenergy Partnership (GBEP).<sup>17</sup></li> <li>• GACSA.</li> </ul>
International /regional/national fora and programmes	<p>FAO is an observer to UNFCCC and provides technical support to developing countries, taking into account their specific needs.</p> <p>FAO contributes to Regional climate weeks and also the SDG regional forum.</p>	<ul style="list-style-type: none"> <li>• The Koronivia Joint Work on Agriculture (KJWA).</li> <li>• Reduced Emissions from avoided Deforestation and Degradation (REDD+).</li> <li>• Participation at the Conferences of the Parties (COPs/UNFCCC).</li> <li>• UNFCCC Biennial Update Reports (BURs).<sup>18</sup></li> </ul>

<sup>13</sup> This table provides an attempt to overview of FAO’s activities, programmes, initiatives with the aim to describe the work on climate change done by different departments/Strategic Programme teams/Regional and Subregional Offices. This is not an exhaustive list, and this table will be further expanded with identified activities and products on climate change.

<sup>14</sup> The NAP process was established under the Cancun Adaptation Framework (CAF). It should enable Parties to formulate and implement NAPs as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs. It is a continuous, progressive and iterative process which should follow a country-driven, gender-sensitive, participatory and transparent approach”. Available at: <https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans>

<sup>15</sup> Nationally Appropriate Mitigation Actions (NAMAs) are policies, programmes and projects that developing countries undertake to contribute to the global effort to reduce GHG emissions. Paragraph 1 (b) (ii) of the Bali Action Plan called for NAMAs by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity building, in a measurable, reportable and verifiable manner.

<sup>16</sup> BEFS Rapid Appraisal. Available at: <http://www.fao.org/energy/bioenergy/bioenergy-and-food-security/assessment/befs-ra/en/>

<sup>17</sup> The Global Bioenergy Partnership (GBEP) is an international initiative established in 2006 and focused, since then, to advance bioenergy for sustainable development, climate change mitigation and adaptation, and food and energy security. FAO is one of the founding Partners of GBEP and hosts its Secretariat in the FAO Headquarters, in Rome.

<sup>18</sup> UNFCCC Biennial Update Reports (BURs) are reports to be submitted by non-Annex I Parties, containing updates of national Greenhouse Gas (GHG) inventories, including a national inventory report and information on mitigation actions, needs and support received. Such reports provide updates on actions undertaken by a Party to implement the Convention, including the status of its GHG emissions and removals by sinks, as well as on the actions to reduce emissions or enhance sinks.

		<ul style="list-style-type: none"> <li>Enhanced Transparency Framework (ETF).</li> <li>Thematic Working Group (TWG) on Agriculture, Food Security and Land Use under the NDC Partnership (NDC-P).</li> <li>Land Use and Resilience Action Pathways under the Marrakech Partnership for Global climate action.</li> </ul>
Access to climate change finance	<p>FAO supports countries to access funds in two ways: directly through accredited subnational, national or regional implementing entities, or via accredited international entities, such as UN agencies, and international financial institutions.</p>	<ul style="list-style-type: none"> <li>GCF, GEF, NAMA Facility, NDC-Partnership Communicating for Agriculture Education Programs (CAEP funds).</li> <li>Capacity-Building Initiative for Transparency (CBIT) trust fund under the GEF.</li> </ul>
Biodiversity	<p>FAO promotes the use of indigenous and locally-adapted plants and animals as well as the selection and multiplication of varieties and autochthonous races adapted or resistant to adverse conditions.</p> <p>FAO offered to host the Biodiversity Mainstreaming Platform to facilitating the dialogue and exchange of information between governments and other stakeholders regarding the conservation, sustainable use, management, and restoration of biodiversity across the agricultural sectors.</p> <p>FAO promotes sustainable forest management and conservation and restoration in global fora and at country level, with focus on multiple-uses and services, including maintaining climate and biodiversity services</p>	<ul style="list-style-type: none"> <li>FAO Strategy on Mainstreaming Biodiversity Across Agricultural Sectors, 2019.</li> <li>FAO Biodiversity Mainstreaming Platform 2016.</li> <li>UN decade on ecosystem restoration (FAO and United Nations Environment Programme (UNEP).</li> </ul>
Climate risk management	<p>FAO develops methodologies and tools to assess the resilience of agricultural producers and rural-based households. Climate risk management combines the joint objectives of disaster risk reduction (DRR) and adaptation to slow on-set long-term environmental change caused by climate variability and change.</p> <p>FAO is not systemically assessing climate risk of its projects but some programmes entail this component, such as GEF projects. Currently FAO is integrating climate risk component into environmental and social standards.</p>	<ul style="list-style-type: none"> <li>DRR Strategies and Action Plans and climate risk screening framework being applied for GEF and GCF proposals.</li> <li>Agriculture disaster risk management plans; development of and capacity building on risk management tools; integration of gender into climate risk planning and response.</li> <li>Mitigation of Climate Change in Agriculture (MICCA).</li> <li>Modelling System for Agricultural Impacts of Climate Change (MOSAICC).</li> <li>Self-evaluation and Holistic Assessment of Climate Resilience of farmers and Pastoralists (SHARP).</li> <li>Safeguards and Safeguards Information System.</li> <li>Work on Damage and Loss in Agriculture.</li> <li>Resilience Index Measurement and Analysis (RIMA).</li> </ul>

<p>Crop production and supply chain</p>	<p>FAO works to cope with the challenges associated with climate change, where crop production must adapt and become resilient to changes.</p> <p>FAO supports rural advisory services on climate change curricula development and implementation.</p>	<ul style="list-style-type: none"> <li>• Climate-smart agriculture (CSA) approach.<sup>19</sup></li> <li>• Global Alliance on Climate-Smart Agriculture (GACSA).</li> <li>• Projects to strengthen national capacity on hydro-meteorological network and climate services.</li> <li>• Agricultural Climate Resilience Enhancement Initiative (ACREI).</li> <li>• Mitigation of Climate Change in Agriculture.</li> <li>• Agroecology Approach.</li> <li>• Conservation Agriculture Approach.</li> <li>• Farmer Field School Approach to strengthen farmers' resilience and adapt agricultural practices and technologies to climate change.</li> </ul>
<p>Urban and city region food systems</p>	<p>FAO aims to reinforce capacities of local institutions and food system actors to reduce risk and vulnerability to climate shocks and develop adaptation strategies and actions.</p>	<ul style="list-style-type: none"> <li>• Urban and city region food systems (local-strategies, plans and food policies).</li> <li>• Food for the Cities and other programmes involving urban agriculture.</li> </ul>
<p>Energy</p>	<p>FAO helps countries promote energy-smart agrifood systems through the identification, planning and implementation of appropriate energy, water, food security and climate-smart strategies that spur agricultural growth and rural development.</p>	<ul style="list-style-type: none"> <li>• FAO Sustainable Bioenergy Support Package.<sup>20</sup></li> <li>• Integrated Food Energy Systems.<sup>21</sup></li> <li>• Investing in renewable energy for food chains through the INVESTA methodology.</li> <li>• Access to sustainable energy for refugees and host communities in protracted crises.<sup>22</sup></li> <li>• Water-Energy-Food Nexus approach.</li> </ul>
<p>Fisheries and aquaculture</p>	<p>FAO provides guidance and support for member countries and partners to effectively mitigate and adapt to the impacts of climate change in the fisheries and aquaculture sector (e.g. strengthening the knowledge base and guidance for policy development, reducing vulnerability of fishers and fish workers through enhanced capacity, developing and implementing climate change adaptation of the fisheries and aquaculture sector projects).</p>	<ul style="list-style-type: none"> <li>• Capacity development on understanding impacts of climate change on fisheries and aquaculture.</li> <li>• Ecosystem Approach to Fisheries (EAF).</li> <li>• Ecosystem Approach to Aquaculture (EAA).</li> <li>• Blue Growth Initiative.</li> <li>• Global Partnership for Climate, Fisheries and Aquaculture (PaCFA).</li> <li>• The African Package for Climate-Resilient Ocean Economies, a joint FAO-World Bank-African Development Bank initiative. 2017.</li> <li>• FIA strategy on Climate Change 2011-2016.</li> <li>• Hosting/organization of international symposia and expert workshops, such as the International</li> </ul>

<sup>19</sup> CSA includes a number of practices across all subsectors, and it is not limited to crops production.

<sup>20</sup> <http://www.fao.org/energy/bioenergy/en/>

<sup>21</sup> <http://www.fao.org/energy/agrifood-chains/investa/en/>; <http://www.fao.org/energy/bioenergy/ifes/en/>

<sup>22</sup> <http://www.fao.org/energy/emergencies/en/>

		<p>Forum on the Effects of Climate Change on Fisheries and Aquaculture.</p> <ul style="list-style-type: none"> <li>• Studies/publications on the impacts of Climate Change on fisheries and aquaculture, and on adaptive and mitigation strategies such as improving feed conversion in aquaculture and fuel and energy use in fisheries to reduce GHG emissions.</li> </ul>
<p>Forestry</p>	<p>FAO's is working on sustainable forest management (SFM), including (agroforestry, urban and peri-urban forestry), forest resource assessment and monitoring, and forest and climate change programmes to enhance national and international action on forests and CCAM. The latter aims to integrate climate change into national forest programmes in support of sustainable forest management and also into relevant national policies and plans addressing climate change mitigation and adaptation.</p>	<ul style="list-style-type: none"> <li>• Support for REDD readiness under UN-REDD and beyond; REDD+ national strategy or action plans; forest reference emission level National Forest Monitoring System (NFMS); REDD+ for measurement, reporting and verification (MRV), Safeguards and Safeguard Information Systems.</li> <li>• Capacity development on REDD+, MRV, National Forest Monitoring (NFM), etc.</li> <li>• Assistance for the development of REDD+/land-use investment plans.</li> <li>• Forest governance (land tenure).</li> <li>• Enhanced Transparency Framework (CBIT-Forest).</li> <li>• FAO Global Forest Resources Assessment (FRA).</li> <li>• Participating and contributing to global and regional forestry and climatic change related policy processes.</li> <li>• Sustainable forest management, including natural forest management and conservation, sustainable forest plantation development, afforestation and reforestation, agroforestry, community forestry, and forest landscape restoration.</li> <li>• Fire management.</li> <li>• Capacity building in various aspects of sustainable forest management.</li> <li>• Forest landscape restoration; The Restoration Initiative (TRI).</li> <li>• Support to the Great Green Wall for Sahara and the Sahel Initiative (GGWSSI).</li> <li>• Great Green Wall of Cities.</li> <li>• Forest and Landscape Restoration Mechanism (FLRM).</li> <li>• FAO's lead on implementation of UN Decade on ecosystem Restoration 2021–2030.</li> <li>• Support to regional restoration initiatives: African Forest Landscape Restoration Initiative (AFR100).</li> <li>• Sustainable Forest Management Toolbox, a knowledge portal.</li> </ul>

		<ul style="list-style-type: none"> <li>• Multi-purpose national forest inventories (NFI), National Forest Monitoring (NFM) and related tools such as the System for Earth Observation Data Access, Processing and Analysis for Land Monitoring (SEPAL) and Open Foris.</li> <li>• Global Forest Resource Assessment (FRA), and related capacity building and use of information to address needs originating from climate change agenda at different levels.</li> <li>• Sustainable wood and forest products supply chains, e.g. Sustainable Wood for a Sustainable World (SW4SW).</li> <li>• Stakeholder engagement, FPIC, and FAO's work on indigenous people.</li> <li>• FAO Investment Center's work/tools related to REDD+ relevant projects; leveraging financing; GCF, GEF, World Bank, etc.</li> </ul>
Land and Soil	FAO works in sustainable land management to minimize land, rehabilitate degraded areas and ensure the optimal use of land resources.	<ul style="list-style-type: none"> <li>• Global Soil Partnership.</li> <li>• Sustainable Land Management Approach.</li> <li>• Soil Organic Matter (SOM).</li> <li>• Recarbonization of global soils Initiative (RECSOIL).</li> </ul>
Monitoring and Statistics		<ul style="list-style-type: none"> <li>• Open Foris.</li> <li>• Collect Earth Online (CEO).</li> <li>• System for Earth Observation Data Access, Processing and Analysis for Land Monitoring (SEPAL).</li> <li>• FAOSTAT datasets on GHG emissions, temperature change, emissions shares, peatland degradation, deforestation, land use and land cover change.</li> <li>• EX-Ante Carbon-balance Tool (EX-ACT).</li> <li>• AQUASTAT.</li> <li>• AquaCrop.</li> <li>• SOLAW (State of the World Land and Water Resources).</li> <li>• Global Agro-ecological Zones.</li> </ul>

Livestock	<p>FAO is contributing to the assessment of livestock production under climatic constraint and to the identification of interventions to increase productivity and reduce the impact of climate variability on livestock outputs, including adaptation needs.</p> <p>FAO aims at increasing the resilience of livelihoods through prevention, detection and control of animal health threats that are driven by climatic and environmental changes.</p>	<ul style="list-style-type: none"> <li>• “Reducing enteric methane for food security and livelihoods” Project.</li> <li>• Global Information and Early Warning System (GLEWS).</li> <li>• Awareness-Raising Activities on Low Emissions Livestock.</li> <li>• Livestock Environmental Assessment and Performance Partnership (LEAP).</li> <li>• Developed the Rift Valley fever Early Warning Decision Support Tool.</li> <li>• EMPRES-i-Global Animal Disease Information System.</li> <li>• Global Livestock Environmental Assessment Model (GLEAM).</li> <li>• Global Agenda for Sustainable Livestock (GASL).</li> </ul>
Water	<p>FAO promotes coherent approaches to sustainable water management and climate change adaptation (CCA) for agricultural cropping systems.</p>	<ul style="list-style-type: none"> <li>• Capacity development on water management and climate change.</li> <li>• Integrated and Resilient Watershed Management.</li> <li>• WaPOR tool.</li> <li>• AquaCrop.</li> <li>• CLIMWAT.</li> <li>• The Global Framework on Water Scarcity in Agriculture (WASAG).</li> </ul>
Social protection and poverty reduction	<p>FAO integrates social protection and poverty reduction into climate change policies and strategies to make it more effective and able to reach its goal of helping the poor to adapt.</p>	<p>Capacity development on contribution of Social Protection to Climate and Disaster Risk Management and through GCF funding programmes under development or implementation.</p> <ul style="list-style-type: none"> <li>• Capacity development on contribution of Social Protection and Poverty Reduction to increase the resilience, adaptive and coping capacity of poor and vulnerable communities to climate change.</li> <li>• Study paper on Managing climate risks through social protection – Reducing rural poverty and building resilient agricultural livelihoods (2019).</li> <li>• Climate-smart agriculture Sourcebook. Chapter Social protection and decent rural employment for CSA.</li> <li>• Red Cross Red Crescent Climate Center interactive tool on social protection, emergency response, resilience and climate change.</li> <li>• Study on addressing the climate change and poverty nexus: a coordinated approach in the context of the 2030 agenda and the Paris agreement (2019).</li> </ul>

		<ul style="list-style-type: none"> <li>Guidance note on Managing climate risks through social protection (forthcoming end 2020).</li> </ul>
Indigenous peoples	<p>FAO works with indigenous peoples to increase their visibility and value their knowledge.</p>	<ul style="list-style-type: none"> <li>FAO Narrative on Indigenous Peoples.</li> <li>Indigenous Peoples Biocentric Restoration Approach.</li> <li>The Global Hub on Indigenous Food Systems.</li> <li>FAO's Policy on Indigenous and Tribal Peoples.</li> <li>Free Prior and Informed Consent (FPIC). In the FAO Environmental and Social Management Guidelines.</li> <li>Capacity development trainings on Free Prior and Informed Consent and the related Environmental and Social Safeguard.</li> </ul>
Nutrition	<p>FAO integrates food security and nutrition within the Climate Change Agenda.</p>	<ul style="list-style-type: none"> <li>Climate and nutrition smart action (consumers' education on healthy, balanced diets; food loss and waste; sustainable value chains that contribute to healthy, balanced diets and nutrition; and bio-fortification using conventional breeding techniques as an example of climate and nutrition smart action).</li> </ul>
Gender	<p>FAO works to mainstream gender into policies and programs and builds capacities for gender-sensitive climate action.</p> <p>FAO promotes knowledge generation, capacity building and implementation of projects supporting gender mainstreaming into climate action.</p> <p>FAO's Climate change strategy identifies supporting countries to integrate a gender perspective in their NAPs and in the implementation of their NDCs.</p>	<ul style="list-style-type: none"> <li>Integration of gender in FAO climate change related programmes such as Nap-Ag Programme, United Nations Development Programme (UNDP) and FAO's Integrating Agriculture in National Adaptation Plans Programme (NAP-Ag).</li> <li>Integration of gender in REDD programme.</li> <li>A training manual on conducting gender-sensitive climate and agriculture research with CCAFS.</li> <li>A Module of the Gender in Agriculture Sourcebook on Climate-Smart Agriculture (with the World Bank and International Fund for Agricultural Development [IFAD]).</li> <li>A comprehensive practical guidance set under development by with CARE International on gender and CSA.</li> </ul>
Food safety	<p>While climate change impacts on food security is well documented, FAO is trying to draw attention to the effects of climate change on various food safety hazards, both microbiological and chemical. These efforts aim to foster better preparedness in addressing climate change-related food safety challenges</p>	<ul style="list-style-type: none"> <li>Research on Climate Change and Implications for food safety (2008) to potential impacts of anticipated changes in climate on food safety and their control at all stages of the food chain.</li> <li>Study on Climate change: Unpacking the burden on food safety (2020) to analyse the relationship between climate change and food safety hazards.</li> </ul>

<p>Rural youth employment</p>	<p>FAO works to provide green skills development and green jobs creation for rural youth to address local climate change related issues, with the goal to support countries in developing national strategies for youth employment, agricultural and rural development and transition to the green economy</p>	<ul style="list-style-type: none"> <li>• Green Jobs for Rural Youth Employment Project.</li> <li>• Capacity development on sustainable agricultural practices and technologies in combating climate change for rural youth.</li> <li>• Creation of green jobs, including public employment programmes (PEPs) and business start-ups for rural youth.</li> <li>• Mainstreaming of green jobs into national agricultural and development policies.</li> </ul>
<p>Responsible global value chains</p>	<p>FAO has extensive experience in working with enterprises, governments, civil society organizations and other stakeholders on promoting responsible business practices and outlining the impact that enterprises can have on the environment through value chains.</p>	<ul style="list-style-type: none"> <li>• OECD-FAO Guidance on Responsible Agricultural Supply Chains.</li> </ul>