One-sixth of the world's population goes to bed hungry. In addition, one billion people lack the essential micronutrients they need to lead healthy lives and another billion adults are overweight, of which almost half are obese. Millions of productive life years are lost due to premature death, disease and disabilities caused by malnutrition, placing intolerable burden not only on individuals and national health systems, but on the entire cultural, social and economic fabric of nations. This represents one of the greatest – and most preventable – impediments to the fulfillment of human potential.

Today, the food and agriculture sector provides livelihoods for 40 percent of the world population. 75 percent of the world's poor are found in rural areas and many directly depend on agriculture or draw a large share of their incomes from agriculture related activities. Econometric analysis suggests that GDP growth arising in agriculture is almost twice as effective in reducing poverty as GDP originating outside the sector.

Agriculture, forestry and fisheries are highly dependent on natural resources. In fact, croplands, pastures and forest occupy 60 percent of terrestrial land, agriculture uses 70 percent of globally withdrawn freshwater, and fisheries impact every marine area of the world. While careless practices cause environmental harm, such as contributing to over one third of global greenhouse emission, good management practices can simultaneously deliver the dual objective of food and energy supply and environmental conservation.

The functioning of food and agriculture systems is dependent on governance variables, such as policy coherence (namely between food, energy and trade) and market transparency. These variables have contributed to distortions, financial speculations and volatility of food markets. Since 2008, food price spikes have had a major impact on people, forcing them to cut-down on their dietary, health and education expenses. Price shocks, market disruptions, macro-economic instability and food insecurity are likely to intensify in the absence of good governance.

“Agriulture is at the centre of a transition to a resource-efficient, low-carbon green economy,” said UNEP Executive Director Achim Steiner.

the challenge is to feed a growing global population without pushing humanity’s footprint beyond planetary boundaries.”
SUSTAINABILITY PATHWAYS

NATIONAL SUSTAINABLE DEVELOPMENT STRATEGIES AND FOOD AND AGRICULTURE

The 1992 Earth Summit called for National Sustainable Development Strategies (NSDS). As of 2009, 106 countries were implementing a NSDS. Developing NSDS does not mean adding an environmental goal to pre-existing socio-economic ones; rather, it is about taking a holistic view of development by looking at inter-dependencies between sectors, in order to maximize synergies and minimize trade-offs among the social, economic, environmental and governance spheres.

Agriculture’s central role to sustainable development is recognized mainly by developing countries, as indicated by the NSDS of Bhutan, Burkina Faso, Madagascar, Philippines and others. As described in their national strategies, countries are at different stages of development, from strategy definition to pilot implementation.

National Sustainable Development Strategies feature the following common issues:

- **Lack of a globally accepted definition of sustainability**: for instance, Madagascar developed a gridline including 7 sustainability pillars and 24 thematic areas for assessing strength and weaknesses, while Philippines chose to focus on 5 different pillars to do the same exercise.
- **Lack of effective implementation**: the lack of clear goals, targets, timeframes and indicators, against which progress could be measured, has not allowed sustainable development strategies to effectively be put in practice.
- **Difficulty of integration**: incorporating environmental considerations into economic planning remains a challenge, especially because the “value” of the natural capital is not reflected in production and consumption costs.
- **Lack of coherence**: national preparations for Rio+20 underscored the need for more coherent decision-making at and between the national, subnational and local levels of government, as well as across thematic sectors; evidence shows that few countries have a well-functioning coordination mechanism to address multi-sectoral national objectives.

FOOD AND AGRICULTURE SYSTEMS AT THE CENTER OF NATIONAL DEVELOPMENT GOALS

- **Reduced poverty and hunger encourages school attendance**
- **A vibrant agriculture sector empowers farmers, most of which being women**
- **A balanced nutrition is key to infant survival**
- **A balanced nutrition is crucial to mothers**

**MDG1** Poverty and hunger when hunger is decreased, poverty is reduced
**MDG2** Primary education
**MDG3** Gender equality
**MDG4** Child mortality
**MDG5** Maternal health
**MDG6** Diseases (infectious)
**MDG7** Environment
**MDG8** Governance

Nutrition-related diseases will become the prime wellbeing concern of humanity

**SDGx** Food Security and Nutrition

Lack of coherence: national preparations for Rio+20 underscored the need for more coherent decision-making at and between the national, subnational and local levels of government, as well as across thematic sectors; evidence shows that few countries have a well-functioning coordination mechanism to address multi-sectoral national objectives.
**AGRICULTURAL SUSTAINABILITY ASSESSMENT IN MADAGASCAR**

In its National Sustainable Development Strategy, Madagascar explains its sustainability assessment process and shows the sustainability profile of some of its key activity sectors, including agriculture. This exercise allowed Madagascar to understand the strengths and weaknesses of its agriculture sector for a sustainable future.

Sustainable development pillars and areas:
- **Governance dimension**: Orientation; Legitimacy and voice; Institutional mechanism; Evaluation, follow-up and final outcome, performance; Accountability / Responsibility.
- **Social dimension**: Social links; Solidarity; Cultural identity / Subsidiarity / Legitimacy; Social impact.
- **Fairness interface**: Accessibility; Inter-generational equity, justice/impartiality; Wealth sharing; Damage compensation.
- **Economic dimension**: Economic coherence; Economic dynamic; Total cost; Financial impact.
- **Viability interface**: Adaptability; Precaution-prevention; Robustness of choices.
- **Environmental dimension**: Natural dynamic; Efficient management of natural resources; Environmental impact; Environmental practices.
- **“Livability” interface**: Living environment; Health and security effects, precautionary principle; Public acceptance; Lifestyle.

The United Nations Commission on Sustainable Development (CSD) has developed 60 indicators of national sustainable development for the implementation of Agenda 21. These indicators relate to the four SD pillars: economic, social, environmental and institutional. This indicator set has been translated into a Dashboard of Sustainability application, presented to the 2002 Johannesburg World Summit on Sustainable Development. The Dashboard puts heterogeneous indicator sets into a meaningful tree structure, aggregates their scores in a simple, transparent way, and displays them in a user-friendly “traffic light colours” format. In addition, it allows users to drill down to the deepest level of detail.

After the 2000 Millennium Summit, the Dashboard of Sustainability featured the Millennium Development Goal (MDG) indicators for over 200 countries. The 60 MDG indicators set is clearly less focused on environmental issues than the CSD indicator set. The Dashboard software has a flexible structure and browser interfaces between the different indicator sets. Currently, attempts are made to translate most of Eurostat’s sustainable development and structural indicators into the Dashboard format, using the four main sustainability pillars of Agenda 21, accommodating 196 indicators. The aim is to study possible options for going “Beyond GDP” with an adequately detailed “societal progress indicator”.

The analysis of Madagascar’s agricultural sector gives the following results (see graph).

The Philippines did a similar exercise using different sustainability criteria. Such exercises are useful to highlight areas for potential progress towards sustainability.
HOW CAN YOU HELP?

**PRODUCERS**
- Engage into projects demonstrating the multifunctionality of sustainable agriculture.
- Raise your voice for having agriculture recognized as pivotal to sustainable development.

**CONSUMERS**
- Show your support to sustainability initiatives by participating in them and/or consuming the goods they deliver (e.g. local deliveries of sustainably produced food).
- Vote for pro-sustainability representatives ready to support concrete sustainable initiatives.

**FOOD INDUSTRY**
- Implement sustainable food and agriculture practices throughout the supply chain.
- Support sustainability assessment to improve your own supply system.

**POLICY-MAKERS**
- Mainstream the food and agriculture sector within sustainable development strategies.
- Bridge food and agriculture with employment, health, climate, trade and other policies.

**RESEARCH REQUIREMENTS**
- Develop sustainability indicators for the food and agriculture sector adapted to national level specificities. For example, The Sustainability Assessment of Food and Agriculture System Guidelines (SAFA) provides a useful framework, including 21 sustainability themes along four pillars; good governance, environmental integrity, economic resilience and social well-being. However, SAFA sub-themes and indicators need to be developed for national policy purposes.

The FAO Guidelines for the Sustainability Assessment of Food and Agriculture systems (SAFA) provide an international reference for sustainable management, monitoring and reporting in food and agriculture at all levels of the supply chain.