

# Post-2015 and SDGs



## Nourishing people, Nurturing the planet

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# 14

THEMES

## Highlights

- Production systems and the policies and institutions that underpin global food security are increasingly inadequate.
- Sustainable agriculture must nurture healthy ecosystems and support the sustainable management of land, water and natural resources, while ensuring world food security.
- To be sustainable, agriculture must meet the needs of present and future generations for its products and services, while ensuring profitability, environmental health and social and economic equity.
- The global transition to sustainable food and agriculture will require major improvements in the efficiency of resource use, in environmental protection and in systems resilience.
- Sustainable agriculture requires a system of global governance that promotes food security concerns in trade regimes and trade policies, and revisits agricultural policies to promote local and regional agricultural markets.

## Sustainable agriculture

### Overview

Persistently high levels of hunger and malnutrition – 842 million chronically hungry people in the world in 2011–2013 – and unsustainable human activity on the earth's carrying capacity present a major challenge for agriculture. To meet the growing food demand of the over nine billion people who will exist by 2050 and the expected dietary changes, agriculture will need to produce 60 percent more food globally and 100 percent more in the developing countries. At the same time, roughly one-third of food produced – 1.3 billion tonnes per year – is lost or wasted globally throughout the supply chain, with enormous financial and environmental costs.

A striking link exists between growth in agriculture and the eradication of hunger and poverty. Agriculture broadly understood – crop and livestock production, fisheries, and forestry – provides income, jobs, food and other goods and services for the majority of people now living in poverty. As a result, overall GDP growth originating in agriculture is, on average, at least twice as effective in reducing poverty as growth generated in non-agriculture sectors, and up to five times more effective than other sectors in resource-poor low-income countries.

### Key challenges

The current trajectory of growth in agricultural production is unsustainable because of its negative impacts on natural resources and the environment. One-third of farm land is degraded, up to 75 percent of crop genetic diversity

has been lost and 22 percent of animal breeds are at risk. More than half of fish stocks are fully exploited and, over the past decade, some 13 million hectares of forests a year were converted into other land uses.

The overarching challenges being faced are the growing scarcity and fast degradation of natural resources, at a time when the demand for food, feed, fibre and goods and services from agriculture (including crops, livestock, forestry, fisheries and aquaculture) is increasing rapidly. Some of the highest population growth is predicted in areas which are dependent on agriculture and already have high rates of food insecurity. Additional factors - many interrelated - complicate the situation:

- Competition over natural resources will continue to intensify. This may come from urban expansion, competition among various agricultural sectors, expansion of agriculture at the expense of forests, industrial use of water, or recreational use of land. In many places this is leading to exclusion of traditional users from access to resources and markets;
- While agriculture is a major contributor to climate change, it is also a victim of its effects. Climate change reduces the resilience of production systems and contributes to natural resource degradation. Temperature increases, modified precipitation regimes and extreme weather events are expected to become significantly more severe in the future;
- Increasing movement of people and goods, environmental changes, and changes in production practices give rise to new threats from diseases (such as highly pathogenic avian influenza) or invasive species (such as tephritid fruit flies), which can affect food safety, human health and the effectiveness and sustainability of production systems. Threats are compounded by inadequate policies and technical capacities, which can put whole food chains at risk;
- The policy agenda and mechanisms for production and resource conservation are mostly disjointed. There is no clear integrated management of ecosystems and/or landscapes.

## What needs to be done?

The challenges outlined above give rise to five key principles for guiding the strategic development of new approaches and the transition to sustainability:

- Principle 1: Improving efficiency in the use of resources is crucial to sustainable agriculture;
- Principle 2: Sustainability requires direct action to conserve, protect and enhance natural resources;
- Principle 3: Agriculture that fails to protect and improve rural livelihoods and social well-being is unsustainable;
- Principle 4: Sustainable agriculture must enhance the resilience of people, communities and ecosystems, especially to climate change and market volatility;
- Principle 5: Good governance is essential for the sustainability of both the natural and human systems.

In order to cope with the rapid pace of change and increased uncertainty, sustainability must be seen as a process, rather than a singularly defined end point to be achieved. This, in turn, requires the development of technical, policy, governance and financing frameworks that support agricultural producers and resource managers engaged in a dynamic process of innovation. In particular:

- Policies and institutions are needed that provide incentives for the adoption of sustainable practices, to impose regulations and costs for actions that deplete or degrade natural resources, and to facilitate access to the knowledge and resources required;
- Sustainable agricultural practices must make full use of technology, research and development, though with much greater integration of local knowledge than in the past. This will require new and more robust partnerships between technical and investment-oriented organizations;
- Evidence-based planning and management of the agricultural sectors requires suitable statistics, geospatial information and maps, qualitative information and knowledge. Analysis should focus on both production systems and the underlying natural and socio-economic resources;
- The challenges relating to stocks and utilization rates of natural resources often transcend national boundaries. International governance mechanisms and processes must support sustainable growth (and the equitable sharing of benefits) in all agriculture sectors, protecting natural resources and discouraging collateral damage.