During the UN Climate Change Conference COP 23, FAO will make available through FAOnow an entire selection of the latest publications on climate change and food security.

**The State of Food Security and Nutrition in the World 2017**
Building resilience for peace and food security

(also available in Arabic, Chinese, French, Russian and Spanish)

The international community is committed to ending hunger and all forms of malnutrition worldwide by 2030. While much progress has been made, conflict and human-induced and natural disasters are causing setbacks. This year’s report warns that the long-term declining trend in undernourishment seems to have come to a halt and may have reversed, largely on account of the above-mentioned factors. Meanwhile, although progress continues to be made in reducing child malnutrition, rising overweight and obesity are a concern in most parts of the world.

**The State of Food and Agriculture 2016**
Climate change, agriculture and food security

(also available in Arabic, Chinese, French, Russian and Spanish)

The Paris Agreement, adopted in December 2015, represents a new beginning in the global effort to stabilize the climate before it is too late. It recognizes the importance of food security in the international response to climate change, as reflected by many countries focusing prominently on the agriculture sector in their planned contributions to adaptation and mitigation. To help put those plans into action, this report identifies strategies, financing opportunities, and data and information needs. It also describes transformative policies and institutions that can overcome barriers to implementation.

**Turning Nationally Determined Contributions into action**


Many countries have recognized that responding to climate change and achieving sustainable development go hand in hand. This connection has been emphasized in the Paris Agreement and in the 2030 Agenda with its 17 SDGs. FAO, which has been proposed as a custodian agency for more than 20 SDG indicators, is in a strong position to support countries in their efforts to achieve the SDGs. This brief summarizes FAO’s analysis of Nationally Determined Contributions (NDCs) and provides an overview of how the Organization, through policy processes, capacity development and technical interventions on the ground, supports the implementation of NDCs in the agriculture sectors.

**FAO Strategy on Climate Change**


The world has a window of opportunity to stabilize global average temperatures to safe levels. FAO’s new climate change strategy refocuses its work to serve global process targeting mitigation of and adaptation to climate change. Built on decades of accumulated global experience and expertise, the strategy translates FAO’s core mandate into strategic choices and action priorities at the global, regional, national and local levels with the central goal of supporting countries in achieving their commitments to face climate change.
Climate Smart Agriculture: building resilience to climate change

Climate-smart agriculture (CSA) is a concept that calls for integrating climate change adaptation and mitigation into agricultural growth strategies. This new open-access book, co-published with Springer, provides tested good practices and innovative approaches for promoting CSA systems in support of food security at country level.

Climate-smart agriculture sourcebook: update – Summary of the second edition 2017

This summary provides an overview of the second, digital edition of the Climate-Smart Agriculture Sourcebook. The new edition includes new findings, case studies and lessons learned. It also takes into account the changes in the landscape of international climate action since the original edition was published in 2013. The 2030 Agenda for Sustainable Development — which encompasses the Paris Agreement on Climate Change, the Sustainable Development Goals and the Addis Ababa Action Agenda — provides an unprecedented international framework for strong national actions and collective international efforts to achieve sustainable development.

Low-emissions development of the beef cattle sector in Argentina

What is the potential for improving beef productivity while reducing enteric methane emission intensity from production? This study identifies low-cost strategies, such as use of conserved fodder and control of reproductive diseases.

From reference levels to results reporting: REDD+ under the UNFCCC

This publication provides a status report on progress and achievements related to the monitoring, reporting and verification of REDD+ activities, as well as an update on activities related to countries’ submissions of their Forest Reference (Emission) Levels. The report also summarizes experiences with the technical assessment process, and offers an overview of initial REDD+ results reporting and technical analyses of those reports.
FAO’s work to enhance countries’ capacity to report to the UNFCCC — agriculture, forestry and other land use


This infographic booklet shows what FAO — through both the REDD+/National Forest Monitoring teams and Mitigating Agriculture GHG Emissions Towards Wider Opportunities project — provides to its Members regarding the Measurement, Reporting and Verification framework. It also presents experiences on the ground with examples from activities in Africa, Asia and Latin America and the Caribbean, and highlights useful resources.

Voluntary Guidelines on National Forest Monitoring


FAO has prepared guidelines to assist forest managers to integrate climate change into forest management plans and practices. Implementation of the guidelines commenced in Latin America and Asia and Southern Africa. Currently, FAO is working with six Eastern African countries on the implementation of the guidelines: Burundi, Ethiopia, Rwanda, South Sudan, Uganda, and the United Republic of Tanzania.

Soils’ potential to contribute to offset international aviation emissions


International aviation is responsible for 1.3 percent of global anthropogenic carbon dioxide emissions. Even considering improvements planned by the International Civil Aviation Organization, a gap of 523 million tonnes of carbon dioxide remains to meet emission reduction targets. This note presents soil carbon sequestration as an option for offsetting these emissions. Success stories of FAO projects, such as the development and implementation of the Quesungual System in Honduras, show it is possible to enhance carbon stocks, thus mitigating increasing contents of GHGs in the atmosphere and at the same time improving food security and climate change resilience.

Greenhouse gas emissions from aquaculture: a life cycle assessment of three Asian systems


Assessing climate change vulnerability in fisheries and aquaculture

Addressing agriculture, forestry and fisheries in National Adaptation Plans — Supplementary guidelines


This publication responds to a call by the Least Developed Group of the United Nations Framework Convention on Climate Change (UNFCCC), inviting international actors to draft sectorial guidelines to the UNFCCC National Adaptation Plan (NAP) Technical Guidelines. The NAP-Ag guidelines aim to support developing countries in reducing the vulnerability of the agriculture sectors to the impacts of climate change by: building adaptive capacities and resilience; addressing agriculture in the formulation and implementation of NAPs; and enhancing the integration of adaptation in agricultural development policies, programmes and plans. The guidelines outline four elements and related steps for preparing the agriculture sector’s contributions to NAPs.

Save food for a better climate! Translating the food loss and waste challenge into climate action


This publication aims to inform on the interrelationship between food loss and waste and climate change. In this context, it highlights the related impacts and outlines the recent global frameworks adopted by the international community, and how they have been translated into national priorities and targets. It explores climate technology options along with the challenges and opportunities related to financing needs. Finally, the publications identifies ways and enabling factors to reduce food loss and waste as part of the collective effort to enhance ambition for climate action while simultaneously delivering the other objectives of the 2030 Agenda.

ClimAfrica — Climate change predictions in sub-Saharan Africa: impacts and adaptations

FAO, Rome, 2017

This document was produced in the ambit of the FAO-led Work Package no. 4 of the ClimAfrica project. It provides an improved understanding of the current dynamics of major food production systems in Africa (up to 2020) and develops a set of conditional vulnerability scenarios based on current agricultural and socio-economic trends to be used to assess impacts under the ClimAfrica project. The methodological approach is based on the FAO methodology for framework for land evaluation and agroecological zoning to develop scenarios of major production systems in sub-Saharan Africa.

Climate change and food security: risks and responses


This report brings together evidence on the impacts of climate change on food security and nutrition. It shows how a cascade of impacts from ecosystems to livelihoods interacts with a series of vulnerabilities, undermining food security and nutrition. The report presents ways to adapt, to reduce vulnerabilities and to build resilience to climate change.
Voluntary Guidelines to Support the Integration of Genetic Diversity into National Climate Change Adaptation Planning

FAO, Rome, 2015, 32 pp. (also available in Arabic, Chinese, French, Russian and Spanish)

These voluntary guidelines address the genetic resource dimension of adaptation planning. They were developed under the aegis of FAO’s intergovernmental Commission on Genetic Resources for Food and Agriculture and approved by FAO Conference in 2015. They aim to assist countries in managing genetic resources as a vital reservoir and tool to adapt agriculture and build resilience into agricultural and food production systems.

The impact of disasters on agriculture: addressing the information gap


The number and frequency of recorded natural disasters, along with the associated impact and damage to livelihoods and economies, are increasing significantly. Natural disasters often destroy critical agricultural assets and infrastructure, disrupting production cycles, trade flows and livelihoods means. This affects food security and causes additional disruptions throughout the value chains. There is limited systematic data and information on the impact of disasters and hazardous events in agriculture. Countries should act to minimize the devastating effects on livelihoods and the economy. Agriculture must be at the centre of these efforts, given its wide interactions with the environment and direct reliance on natural resources for production.

Benefits of farm leve disaster risk reduction practices in agriculture: preliminary findings


The study identify practices that help to reduce the vulnerability of households and communities to natural hazards. The study uses a systematic approach to quantify, on a case-by-case basis, how much damage and loss can be reduced in the agriculture sector through the implementation of disaster-risk-reduction (DRR) good practices at farm level, compared with usual practices. The analyses presented are based on data collected from ongoing projects that promote local good practices for DRR and climate change adaptation. The aim is to inform policy-makers and practitioners on the opportunities to reduce risk exposure of farmers by the result of this study.

The impact of disasters on agriculture and food security


This study assesses the impact of medium- to large-scale natural hazards and disasters on the agricultural sectors in developing countries between 2003 and 2013, focusing on direct physical damage and indirect economic losses. The findings of the study are expected to support national and international efforts to reduce damage and losses caused by disasters and strengthen the resilience of the agricultural sectors, in line with resilience targets set under the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals, and the Universal Climate Change Agreement.
Adoption of climate technologies in the agrifood sector: methodology


Global agrifood systems play an important role in GHG emissions and are therefore increasingly under pressure to achieve efficiency improvements and reduce their environmental footprint. Fostering the adoption of best available green technologies along agrifood supply chains is an essential step toward this objective. As a contribution to quickly expanding literature on the subject, the report, produced in collaboration with the European Bank for Reconstruction and Development, provides a practical methodology to enable a country or funding agency to assess and monitor the market penetration of sustainable climate technologies and practices in agrifood chains.

Understanding the drought impact of El Niño on the global agricultural areas: available methodologies and their relevance for the sector.


During El Niño episodes, the normal patterns of tropical precipitation and atmospheric circulation become disrupted, triggering extreme climate events around the globe and affecting the intensity and frequency of hurricanes. Disasters create poverty traps that increase the prevalence of food insecurity and malnutrition.

Climate Smart Agriculture Sourcebook


The aim of the sourcebook is to guide policy-makers, programme managers, sectoral experts, academics, extensionists and practitioners in their efforts to make the agricultural sectors more climate-smart, more sustainable and more productive, while responding to the challenges of climate change. The sourcebook illustrates the concept, details CSA approaches in and across different subsectors, and outlines enabling frameworks.

Tackling climate change through livestock

FAO, Rome, 2013, 139 pp. (also available in French)

As renewed international efforts are needed to curb GHG emissions, the livestock sector — a significant emitter of greenhouse gas — has the potential to reduce its emissions significantly.
FAOnow is a free mobile application for quick and easy access to latest news, events and success stories from the Food and Agriculture Organization of the United Nations.

The application downloads latest information to your device so you can read stories offline, save them as favorites for quick reference and access the latest knowledge on topics related to food security and agriculture.