



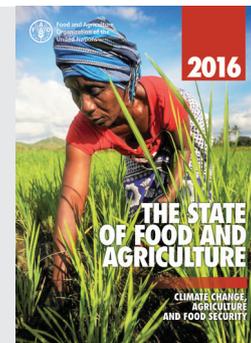
**Food and Agriculture Organization
of the United Nations**

The State of Food and Agriculture 2016

Climate change, agriculture and food security

THE WAY FORWARD: POLICIES AND FINANCING FOR CLIMATE CHANGE ADAPTATION AND MITIGATION IN AGRICULTURE

Countries have recognized the need for comprehensive changes in agriculture and food systems in order to adapt to and contribute to mitigation of climate change. To further these changes, appropriate policies and institutions are needed that align agricultural development, food security and climate objectives. They also have to be supported by financial resources, which must be used strategically to ensure maximum impact.



Countries are paying increasing attention to the need for climate change adaptation and mitigation in agriculture

Until recently neither the vulnerability of agriculture – including crops, livestock, fisheries, aquaculture and forestry – to climate change nor its potential to contribute to mitigating climate change have received the attention they deserve. Today, the importance of a response to climate change – in terms of adaptation and mitigation – in agriculture is widely recognized. This awareness is reflected in the Intended Nationally Determined Contributions (INDCs) submitted by countries as a basis for negotiations, which produced the 2015 Paris Agreement on Climate Change.¹ These will guide country-level climate action over the coming years. They include targets and strategies for addressing the causes of climate change and responding to its consequences. The agriculture sectors featured prominently in the INDCs, with 94 percent of all countries including them in their mitigation and/or adaptation contributions.

Many countries have designed broad climate change policies, strategies and targets, but few have spelled out the details of action plans to achieve climate targets. The INDCs are a first step in a process of rethinking agricultural and rural development under climate change. The United Nations Framework Convention on Climate Change (UNFCCC) has already established mechanisms, such as National Adaptation Plans, to underpin concerted actions to address climate change. Those mechanisms need to be integrated into broader agricultural and food security and nutrition policies. They also need to be accompanied by appropriate financing mechanisms and levels of funding commensurate with the magnitude of the challenge.

1 Once a country has ratified the Agreement, its previously submitted INDC will become a Nationally Determined Contribution (NDC).

Policies on climate, agriculture, food and nutrition should be realigned and integrated

Changes in agriculture and food systems to deal with climate change will only come about if they are supported by appropriate policies, institutional frameworks and financing. These enabling factors are important for agricultural development in general, but are made even more urgent by climate change. Policy frameworks need to be modified to align agricultural development, food security and nutrition, and climate stability objectives. What are the key policy areas for intervention?

Policies for climate change: aligning climate and development goals



Managing natural resources



Supporting and facilitating collective action



Managing risks



Building institutions and policies for more resilient systems with lower emissions



Addressing transboundary issues

Managing natural resources

Crops and livestock are the most important sectors driving deforestation and land use change, which account for nearly 11 percent of all greenhouse gas emissions. The energy sector is also closely linked to forests and land use in most developing countries, through the widespread dependence on wood fuels and the expansion onto forest land of biofuel feedstock production. To achieve multiple objectives in agriculture, energy and forestry, large-scale land-use planning is needed.

Supporting and facilitating collective action

Climate change gives rise to new and increasing demands for collective action and coordination among stakeholders. Policies and institutions must facilitate and support coordinated design and implementation of actions, either in a specific area – e.g. a watershed or forest – or in a sector, such as an entire food chain. Key areas are cross-sectoral coordination to support landscape restoration, multistakeholder dialogues for improved governance of land and water tenure systems and the promotion of social networks. Promoting inclusiveness and transparency in decision-making is particularly important for the management of natural resources.

Managing risks

Several tools can help assess present and future climate change effects, e.g. weather stations, weather and climate projection tools, environmental monitoring tools and vulnerability assessments. Potential mechanisms for integrated risk management include national boards to coordinate with institutions for risk monitoring, prevention, control and response at the local and global levels. Social protection programmes can help vulnerable people cope with risk. Policies and institutions must also support the diversification of livelihood strategies, inter alia by promoting improved access to credit, insurance, information and training.

Building institutions and policies for more resilient systems with lower emissions

Institutions are needed that support increased and stabilized returns from agricultural production. Agricultural input and output markets in particular are crucial. Climate change makes it even more important to create links between smallholders and local, national and regional markets. This also requires investment in small- and medium-size food processors and in small-scale traders at the retail and wholesale levels. Other key institutions include rural credit and insurance programmes, agricultural extension, and land and water tenure arrangements.

Strengthening regional and international cooperation

Climate change may affect resources – such as water, fish stocks and ecosystems – that are transboundary in nature, as well as the migration of species, people and human activities as they seek to adjust to changed conditions. In addition, extreme events, such as forest fires, species invasions, and pests and diseases, can reach across national boundaries. Strengthened regional and international cooperation is necessary to facilitate the exchange of knowledge and the management of common resources.

Undoing environmentally harmful subsidies and support measures

Last, but not least, a realignment of agricultural support policies is needed. In 2015, countries spent more than US\$560 billion on agricultural production support, including subsidies on inputs and direct payments to farmers. Some measures, such as input subsidies, may induce inefficient use of inputs such as agrochemicals and increase the emissions intensity of production. Making support conditional upon the adoption of practices that lower emissions and conserve natural resources can help align agricultural development and climate goals.

Agricultural climate finance must be used strategically for maximum impact

International public finance for climate change mitigation and adaptation for agriculture has increased substantially since the beginning of the century, but levels of climate finance for the sector are still relatively low. International public finance for climate change will probably remain a fraction of overall investment in agriculture. However, when used properly, climate-related finance can help redirect other sources of finance for agricultural development towards investments in enabling institutions, technologies and practices that contribute to climate change adaptation and mitigation in agriculture. The challenge is to make strategic use of available financing. What are some of the key issues?

Using climate finance strategically



Addressing the capacity challenge



Support the enabling environment for climate-smart agriculture



Mainstreaming climate change in domestic budgets



Unlocking private capital for climate-smart agricultural investment

Addressing the capacity challenge

Systemic capacity constraints currently hamper developing country access to and effective use of climate finance for agriculture. This “capacity gap” in policy-making and institutional development, which can manifest itself at both funding and receiving ends, hinders support for the transition to sustainable agriculture. Closing the gap should be made a priority by funders and countries alike, so that climate finance can serve its transformative role for food and agriculture.

Supporting the enabling environment for climate-smart agriculture

Climate financing must be used to reinforce the enabling environment needed to overcome barriers to the adoption of climate-smart agriculture. This involves a focus on building appropriate institutions and policies, so that farmers are enabled to undertake transformational changes. Improving the enabling environment is especially needed for the vast majority of smallholder farmers, who are effectively disenfranchised from climate financing and denied opportunities for investing in productive activities that would improve their livelihoods, productivity and incomes.

Mainstreaming climate change in domestic budgets

Domestic government budgets are a key source of climate-relevant finance. For climate-related goals to be achieved, domestic budgets for agricultural investments need to reflect the systematic integration of climate change considerations into policies and planning. Climate change budget mainstreaming has to be addressed in the context of a country’s overall financial management systems, and efforts to enhance the integration of climate change into domestic budgets should be aligned with efforts to strengthen public financial and expenditure management.

Unlocking private capital for climate-smart agricultural investment

Climate finance can also act as a catalyst to leverage larger flows of public and private funding for sustainable agriculture. In particular, it can help address the constraints that prevent financial service providers from offering the types of financial services that smallholders and small and medium-size enterprises require to undertake climate-smart investments. It can be used to demonstrate the viability of climate-smart agricultural investments and to pilot innovative mechanisms to leverage additional sources of investment, including: public-private partnerships, new investment vehicles and the bundling of a range of financial instruments such as insurance products and value chain finance.

This is Info note number 3 of 3 drawn from *The State of Food and Agriculture 2016. Climate change, agriculture and food security*. For sources and more detail, please refer to the complete report (available at www.fao.org/3/a-i6030e.pdf).

Info note 1 presents the main contents of the report and discusses the changes needed in agriculture in order to respond to the challenge of climate change. Info note 2 discusses the constraints to adoption of improved agricultural practices for mitigation and adaptation to climate change.

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