

# Climate change: building smallholder resilience



Enabling poor rural people  
to overcome poverty

Smallholder farmers are the backbone of the rural economy – but they are bearing the brunt of climate change. Worldwide, there are 500 million smallholder farms supporting some 2 billion people. These farmers inhabit some of the most at-risk landscapes, including hillsides, deserts and floodplains. Climate change multiplies the threats facing smallholders, endangering the natural assets they depend on and accelerating environmental degradation.

Over the centuries, smallholders have learned to adjust to environmental change and climate variability. But the current speed and intensity of climate change are outpacing their capacity to adapt. Crop failures and livestock deaths are causing economic losses, raising food prices and undermining food security with ever-greater frequency, especially in parts of sub-Saharan Africa. At the same time, demand for food is increasing as populations grow and dietary habits change.



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Agriculture, along with forestry, can play a key role in tackling climate change. Improving land management and farming practices and planting forests can help lower greenhouse gas emissions.

Poor farmers are custodians of natural resources, often managing vast areas of land and forest. Targeted assistance can enhance this crucial role. IFAD is committed to scaling up investments in sustainable agricultural intensification, focusing on risk and resilience, promoting value chains that drive 'green growth', supporting better governance and policies on natural assets, and promoting knowledge-intensive and community-led responses.

A crucial feature of IFAD's approach to building poor rural people's resilience to climate change is soliciting their views during the planning process. With their participation, climate change risks can be reduced and progress towards a world without poverty can be accelerated.

## **IFAD's climate change strategy**

Environmental threats such as climate change are inseparable from IFAD's mission to enable poor rural people to overcome poverty. Climate change is multiplying their existing risks and creating new ones – while possibly opening up some new opportunities. In 2010, IFAD's Executive Board approved a climate change strategy to ensure a systematic focus on the implications of climate change for our activities at the country level. The strategy aims to maximize IFAD's impact on rural poverty in a changing climate. It has three purposes:

- To support innovative approaches to helping smallholder producers build their resilience to climate change
- To enable smallholder farmers to take advantage of available mitigation incentives and funding
- To inform a more cogent dialogue on climate change, rural development, agriculture and food security

## FACTS

- In rural areas of developing countries, nearly 2 billion people live on less than US\$2 a day.
- Around 1 billion people go hungry every day.
- By 2050 food production needs to increase by 70 per cent, but the total arable area in developing countries may increase by no more than 12 per cent, mostly in sub-Saharan Africa and Latin America.
- In Africa alone, climate change will expose 75 million to 250 million more people to increased water stress by 2020.
- Agriculture accounts for 14 per cent of greenhouse gas emissions, and forestry for 18 per cent.
- There are around 500 million smallholder farms in the world. Smallholders provide up to 80 per cent of food consumed in Asia and sub-Saharan Africa.

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## LINKS

IFAD and climate change  
[www.ifad.org/climate/](http://www.ifad.org/climate/)

United Nations Framework Convention  
on Climate Change  
[www.unfccc.int](http://www.unfccc.int)

Intergovernmental Panel  
on Climate Change  
[www.ipcc.ch](http://www.ipcc.ch)

COP 17  
[www.cop17durban.com](http://www.cop17durban.com)

World Bank 2010 World Development  
Report: Development and Climate Change  
[www.worldbank.org/wdr2010](http://www.worldbank.org/wdr2010)



IFAD is an international financial institution and a specialized United Nations agency dedicated to eradicating poverty and hunger in rural areas of developing countries.

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# What climate change means for rural development

**Climate change has five key implications for rural development programmes:**

**The risks created by climate change require urgent attention.**

Investing now in adaptation and mitigation measures will be far less costly than in the future.

Climate change magnifies traditional risks. Farmers can no longer rely on historical averages of factors such as rainfall and temperature, because climate change is increasing climate variability, the range of extremes and the scale of volatility.

Beyond traditional risks, smallholders will face new threats, such as sea-level rise and the impact of melting glaciers on water supply. Mechanisms for emission rewards and carbon-financing schemes are complex, and efforts will be needed to ensure that poor people are not shut out of such benefits through social exclusion or limitations on land-use rights.

**Uncertainty over climate impacts is no reason for inaction.**

New models can help reduce uncertainty in local assessments of vulnerability to climate change. To deal with residual uncertainties, it is important to take actions that offer significant development benefits under a range of climate scenarios – also called ‘no-regret’ options. These measures aid communities both in building resilience to a range of potential shocks and in adjusting to longer-term climatic trends where these are clear. Approaches that help maintain agricultural production with or without climate change have obvious benefits. These include promoting crop diversity and biodiversity, using integrated farming and agroforestry systems, and improving post-harvest management.

**There is an enormous opportunity – and need – to scale up ‘multiple benefit’ approaches to intensifying agriculture.**

Sustainable management of land and watersheds, integrated pest management and organic agriculture are among the ‘multiple benefit’ approaches highlighted in IFAD’s *Rural Poverty Report 2011*. These approaches increase yields, incomes, food security and climate resilience, and they protect biodiversity and reduce greenhouse gas emissions, often simultaneously. There is no standard approach – strategies must be adapted to local circumstances. The key is building resilience by maintaining healthy and diverse landscapes, diverse production systems and healthy soil that can retain moisture and nutrients.

**Responding to climate change also means renewing efforts to tackle wider development challenges.**

Many of the programmes we support are designed to increase smallholders’ resilience to shocks, which are often related to weather. A coherent response to climate change requires continued emphasis on good development practices. This includes involving communities in managing natural resources, helping people acquire secure tenure to land, improving access to credit and markets, and strengthening the quality of governance. Recognizing the relevance of farmers’ traditional and indigenous knowledge is crucial, as is understanding and enabling women’s knowledge and roles in responding to climate change.

**Smallholder farmers must benefit more from climate finance.**

Estimates of the annual cost of climate change adaptation in developing world agriculture range from US\$7 billion to US\$12 billion per year. But smallholders face significant risks and barriers that limit their access to climate finance, including their insecure land tenure and the high cost of implementing projects.

Climate change is making smallholder development more expensive. Climate-resilient programmes typically have higher up-front costs, including for infrastructure, skills development for farmers and strengthening of institutions.

International climate finance is often linked to particular global policy goals, such as emissions mitigation, adaptation or efficient energy. In IFAD’s experience these issues converge on the ground, and they must be treated holistically if projects are to succeed.