

SMALLHOLDER INNOVATION FOR RESILIENCE (SIFOR)



A five-year project to strengthen biocultural innovation for food security in the face of climate change.



Project partners

SIFOR IN BRIEF

For centuries, small-scale farmers and indigenous people have developed new tools and strategies to cope with their harsh environments — resilient crop varieties, genetically diverse seed systems and resource-conserving technologies. Many of these could prove vital in the effort to adapt agriculture to climate change. And yet most agricultural investment focuses on ‘top-down’ research and development, weakening the capacity of local people to innovate for independent adaptation. Through participatory action-research, tools development and capacity building, the SIFOR project will help redress the balance: nurturing smallholder advances and traditional knowledge, identifying innovations that enhance productivity; and linking small-scale farmers with crop scientists in four focal countries.

WHY NOW?

Across the world, agriculture faces a dual crisis. On the one hand, the world must significantly increase production to feed a growing global population, estimated to reach nine billion by 2050. On the other hand, we must also ensure that our agricultural systems can adapt to inevitable short- and long-term changes in climate. Tackling these challenges requires us to focus on three key areas:

Small-scale farmers

The agriculture community increasingly agrees that efforts to ensure food security must prioritise the 850 million people — many of whom are small-scale farmers — who are under-fed and under-nourished today. Those farmers living in marginal areas are often also those most impacted by climate change, despite having contributed least to the problem.

Sustainable intensification

The rising interest in sustainable intensification offers a key opportunity to promote more ecologically sustainable solutions that can both support productivity and conserve productive resources in the long term.

Agrobiodiversity

A growing body of scientific evidence confirms that conserving local agrobiodiversity — which safeguards genetic diversity and resilience — is critical for adapting to climate change. Yet this diversity is steadily being lost.

OUR AMBITIONS

Through research, action and capacity building over five years, the SIFOR project aims to achieve:

Better food security

By supporting local innovations and helping these to spread, the productivity, adaptation capacity and incomes of thousands of poor small-scale farmers facing adverse climatic changes will rise.

Better conservation

Small-scale farmers, scientists and policymakers will recognise the need to conserve diverse crop varieties and traditional knowledge.

Better institutions

Community institutions and organisations will be equipped to support innovation; and farmer and formal seed systems will be better linked and mutually supportive.

Better outlook

Small-scale and traditional farmers will not be seen as a hindrance to increasing agricultural production but as essential partners for achieving food security in the short and long term.



WHO'S WHO IN SIFOR

The SIFOR project works at local, national and international levels and includes a number of different partners:

In-country lead organisations

Within the four focal countries — China, India, Kenya and Peru — lead organisations support participatory action-research led by farmers:

- China** Centre for Chinese Agricultural Policy (CCAP)
- India** Lok Chetna Manch (LCM)
- Kenya** Kenya Forestry Research Institute (KEFRI)
- Peru** Asociación ANDES

Indigenous farmers

In each focal country, SIFOR works closely with indigenous farmers in areas of important crop diversity, including:

- China** 21 villages in the Karst Mountains; rich in waxy maize and rice
- India** 10 Lepcha and Limbu and multi caste ethnic villages in eastern and central Himalayas; rich in rice and millets

Kenya 27 coastal Mijikenda villages; rich in indigenous vegetables and maize

Peru 5 Quechua communities in the Potato Park, Cusco, Peru; home to 1,430 varieties of native potato

Agricultural institutions

Other local and national partners are helping to bring crop science into the mix, to complement farmers' knowledge. They include: The Guangxi Maize Research Institute and the Institute of Crop Science of China's Academy of Agricultural Science; the Kenya Agricultural Research Institute (KARI); and the International Potato Centre (Lima, Peru).

The International Institute for Environment and Development (IIED)

IIED coordinates the project at the international level, ensuring it delivers the rigorous and comparable findings needed to inform and influence policy debates. The institute has been working to protect the traditional knowledge systems and rights of these communities since 2004.

The Project Advisory Committee

This committee brings together five leading experts whose combined experience and expertise can help to bring about the desired changes:

- Dr. Linda Collette, Secretary of the FAO Commission on Genetic Resources for Food and Agriculture
- Dr. Ronnie Vernooy, Bioversity International
- Professor Graham Dufield, Leeds University
- Professor Janice Jiggins, Wageningen University
- Geoff Tansey, Agriculture and IPR expert



TIMELINE OF ACTIVITIES

ACTIVITIES...

BY COUNTRY TEAMS AND FARMERS	BY IIED AND LEAD ORGANISATIONS	TO ENGAGE STAKEHOLDERS	KEY INTERNATIONAL POLICY FORUMS
MID 2012			
Planning	Inception workshop (China)	Project Advisory Committee	
2013			
Baseline study on innovation	Coordination workshop (Peru)	Project Advisory Committee	FAO Commission on Genetic Resources & Committee on Food Security
National policy reviews	International policy review	Stakeholder workshops and innovation platforms in each country; Participatory Plant Breeding schemes	FAO Treaty on Plant Genetic Resources Convention on Biological Diversity (CBD)
2014 - 2015			
Innovations research	Learning & coordination workshop (India)	As above	FAO bodies (as above)
Tools development	International policy and literature reviews	International policy dialogue (India)	CBD, World Intellectual Property Organisation, UN Framework Convention on Climate Change, International Agricultural Research centres (CGIARs), International Convention for Protection of Plant Varieties (UPOV)
2016 - MID 2017			
Tools development	Learning & coordination workshop (Kenya)	As above	As above + WTO
Policy research	Dissemination and policy engagement	International policy dialogue (Kenya)	World Trade Organisation
Dissemination and policy engagement			

OUTPUTS AND OUTCOMES

The work of SIFOR project partners and collaborators is made up of four key strands:

- 1. Identifying both local innovations that enhance productivity and the conditions that foster resilient innovations systems.**
- 2. Developing tools to strengthen innovation systems, market biocultural products and secure local rights.**
- 3. Improving farmers' capacity to sustain resilient innovation systems and agrobiodiversity**
- 4. Establishing policies and institutions that support local innovation systems.**

Success in each of these areas will enable the emergence of thriving and resilient innovation systems that ensure food security and adaptation to climate change now and in the future.

By 2017, we will have delivered:

New evidence

In China, India, Kenya and Peru, we will gather evidence of the role that traditional crop varieties and innovations play in boosting resilience to climatic shocks; and we will share this widely to influence and inspire others.

Tools and resources

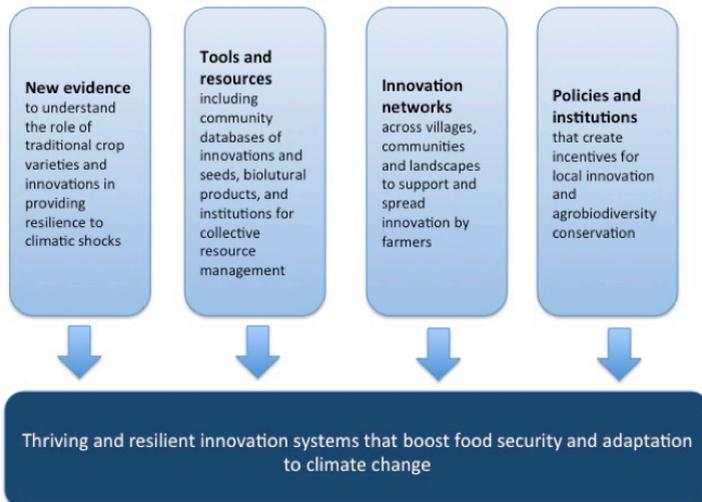
We will develop tools to strengthen biocultural innovation systems as the key to independent adaptation to climate change. These tools will include community databases of innovations and seeds; novel biocultural products and intellectual property tools; collective resource management institutions; and participatory plant breeding schemes through partnerships with scientists. We will share all new evidence, tools and guidance through research reports, policy briefings, online toolkits, country case studies and a practical handbook for farmers.

Innovation networks

We will revitalise networks that support and spread farmers' innovations across villages, communities and landscapes. These will be supported by local-national networks involving farmers, scientists and policymakers.

Policies and institutions

Within each focal country and at international level, we will increase awareness among policymakers and scientists — particularly those working in agriculture, biodiversity, climate change and intellectual property — of the need to support small-scale innovation and local agrobiodiversity conservation. These decision makers will be more committed to making policy changes that create incentives and address negative pressures.



GET INVOLVED

Visit our website - www.bioculturalheritage.org - to discover tools and guidance on how to encourage traditional knowledge and biocultural systems that support adaptation to climate change across different countries and regions. All the latest research findings and outputs from SIFOR are also available online or you can subscribe for quarterly email updates.

Get in touch with a member of our team to find out more about the project and how you can get involved:

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SUPPORTING PARTICIPATORY PLANT BREEDING

We believe that this project is timely, valuable and needed around the world. In China, the first and only Participatory Plant Breeding (PPB) programme is already changing the outlook of agriculture policymakers and scientists; and we are now looking for funding to keep this programme going and scale it up.

Building on the lessons we have learnt from 15 years of successful PPB in China, we are also seeking funding to establish new PPB initiatives in our target areas along the Kenyan coast, and in the Indian Himalayas and Peruvian Andes. Please contact any member of our team for more information.

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