RESEARCH PROGRAM ON Climate Change, Agriculture and Food Security

CGIAR CCAFS

Info Note

How can we develop value chain programs that address climate risks?

Lessons from an IFAD-CGIAR learning event

Sonja Vermeulen, Dhanush Dinesh, Peter Läderach, Caroline Mwongera

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Key messages

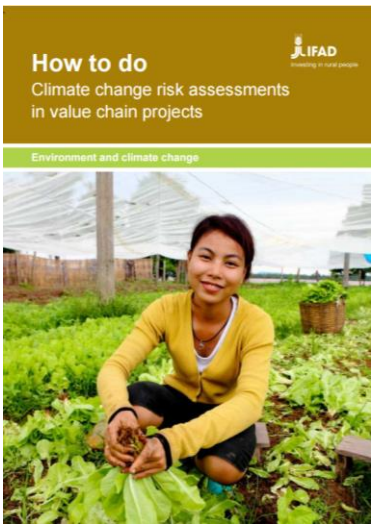
- The "How To Do Note: Climate change risk assessments in value chain projects" provides guidance for the design and development of climate-smart value chains.
- A number of tools and resources are available to support decision makers at various stages in value chain development.
- Mainstreaming climate risk management approaches in different stages of value chain development helps increase resilience of smallholder farmers.
- The IFAD-CCAFS learning alliance generates and shares knowledge to support IFAD's programming needs.

Agriculture's growing prominence in climate priorities is a major opportunity to enhance IFAD's positive impact on smallholders' engagement in value chains. Value chain projects face multiple climate risks – and offer novel ways to manage risk. The International Fund for Agricultural Development (IFAD) and the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) held a learning event on 25 February 2016 in Rome to discuss knowledge-based approaches to develop value chains programs that address climate risks. In the opening introductions, IFAD attendees indicated that in their work they are trying to maximise the economic benefits of value chains to smallholders under rapid environmental change. Thus they need tools, tactics and approaches to manage climate risks and opportunities at the design and implementation phases of value chain investment projects. A key conclusion of the learning event was that building in-country capacity to use relevant tools for real decisions is even more important than building the tools.

How To Do Note: Climate change risk assessments in value chain projects

The "*How To Do Note (HTDN) on climate change risk assessments in value chain projects*" provides guidance for the design of climate-smart value chain projects, which incorporates climate change risk assessments. The HTDN offers a simple five step process for design of climate-smart value chains.

1. Selection of the value chain
2. Identification of key climate risks in the value chain
3. Choice of the most effective climate interventions
4. Targeting those most vulnerable to climate risk
5. Reaching scale with climate interventions



Knowledge-based development of climate-smart value chains

A range of tools and resources are available to support the development of climate-smart value chains in different stages.

1. *Selection of the value chain*

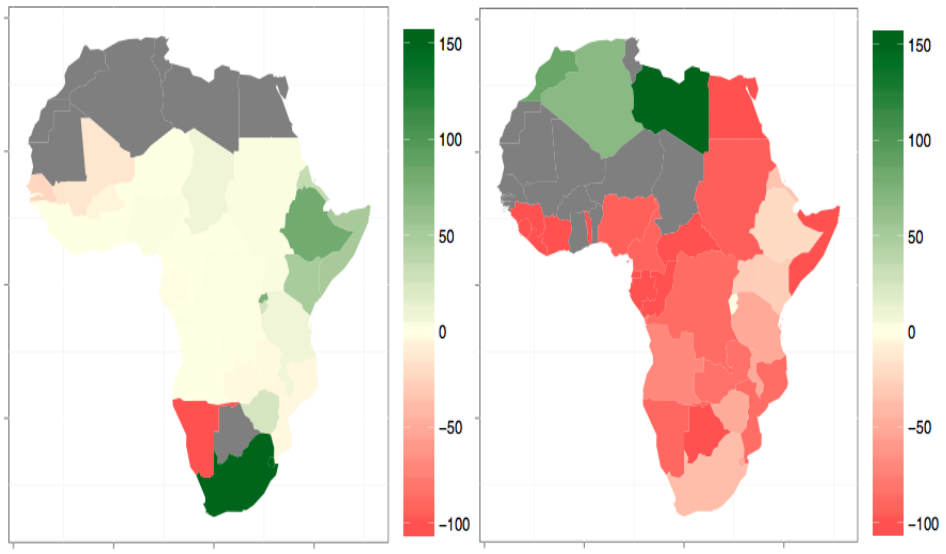
Value chains may be pre-selected based on economic priorities. But in some cases future risks, including climate risk, may play a role in deciding which value chain investments offer most opportunities to future livelihoods. For example, the recent design process in Djibouti selected marine value chains over land-based value chains as the best option for investment given the risk profile. To support decision-making, CIAT-CCAFS has developed CSA country profiles for Argentina, Colombia, Costa Rica, El Salvador, Grenada, Kenya, Mexico, Nicaragua, Peru, Rwanda, Sri Lanka and Uruguay. These profiles provide brief yet comprehensive overviews of the potential for climate-smart agriculture, including both technical and policy aspects, across key value chains in the country.

Figure 1. CSA country profiles provide brief yet comprehensive overview of the status of CSA activities and enabling environment in a given country.

2. *Identification of key climate risks in value chains*

A mix of scientific and participatory approaches is the best way to identify which climate risks and opportunities matter most for future farm livelihoods. As identified in the learning event, GIS mapping provides an inexpensive and accessible way to bring together science and stakeholder perceptions. CIAT-CCAFS has helped IFAD with mapping shifts in the geography of crop suitability, e.g. for coffee, cassava and common beans (see Figure 2). As work with rice farmers in Colombia shows, combining big data with stakeholder advice can unlock our ability to make more informed choices on what and when to farm under climatic uncertainty.

Figure 2 Projected change in suitable area by 2050 (RCP8.5) (%)



Cassava **Common beans**

Sources:
Ramirez-Villegas, J. et al. 2013; Jarvis, A., Ramirez-Villegas, J. et al. 2012; Ramirez-Villegas, J. and Thornton, P.K. 2015.

Decision tools can help select the best interventions for a particular location, to help policy makers and farmers prioritise adaptation actions. Photo: N. Palmer (CIAT)

3. *Choice of most effective climate interventions*

Interventions to manage climate risks in value chains range from specific "climate-proofing" actions (e.g. more heat-resistant storage facilities) through to diversification and transformative change, for example a shift in major agricultural commodities, farming systems or diets. Decision tools at national and local levels can help make the best choices, calculate cost-benefit ratios, and understand the support that farmers need for adoption. At the local level, tools like CIAT-CCAFS' Climate-Smart Agriculture Rapid Appraisal (CSA RA) can enable farmers to prioritise adaptation actions. These local-level priorities can provide the basis for cost-benefit analysis of competing options to inform national-level planning, as CIAT-CCAFS is developing in partnership with IFAD in Nicaragua (NICADAPTA), Uganda and Vietnam. In both cases, effective engagement with decision-makers is an important success factor, and CIAT has captured lessons for effective engagement.

Farmers in Lawra, Ghana. Understanding gender and social differences is essential to ensure that initiatives address, rather reinforce, gender gaps. Photo: C. Peterson (CIAT)

4. *Targeting those most vulnerable to climate risk*

Value chain projects may fail to reach those most at risk from climate change impacts, or worse still, exacerbate existing inequalities. Improved understanding of how climate change vulnerability overlaps with poverty, gender, age or landlessness can help get investments to the people most in need. Developing interventions that reach and benefit both genders means greater resilience for communities as a whole (*The Gender Advantage: Women on the front line of climate change* [IFAD, 2014]). Participatory vulnerability analysis, such used in CIAT-CCAFS's CSA RA tool or the Gender and Inclusion Toolbox, can help tease out critical differences within households and communities.

5. *Reaching scale*

Intelligent investment in institutions and capacity will be more important than technical innovations to generate widespread and lasting benefits from climate risk management. IFAD's emphasis on local institution-building in value chain projects provides a strong foundation for adaptive capacity. For example, the ASAP investment in Morocco emphasizes information flows among value chain actors, while the Nicaragua project is designed to scale up by strengthening farmers' cooperatives across the country. The Rwanda project engages with policy – specifically, the national building codes. Engagement with the private sector can also be an effective approach. For example, climate change adaptation measures are being built into existing voluntary certification in coffee and cocoa value chains, allowing rapid scaling up to 30% of global cocoa producers and 15% of global coffee producers, with an initial focus on Ghana, Nicaragua and Peru. CIAT is also piloting the carbon insetting approach, which involves engaging with companies to develop carbon offset projects within their spheres of influence.

Figure 3. Achieving synergies between private and public sector interventions in agricultural value chains. M. Lundy (CIAT).

Further Reading

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This brief summarizes lessons from an IFAD-CGIAR learning event held in Rome, 25 February 2016.

Sonja Vermeulen (s.vermeulen@cgiar.org) is Head of Research at CCAFS, based at the University of Copenhagen.

Dhanush Dinesh (d.dinesh@cgiar.org) is Global Policy Engagement Manager at CCAFS, based at the University of Copenhagen.

Peter Läderach (p.laderach@cgiar.org) is Senior Climate Change Specialist at the International Center for Tropical Agriculture (CIAT).

Caroline Mwongera (c.mwongera@cgiar.org) is Farming Systems & Climate Change Scientist at International Center for Tropical Agriculture (CIAT).

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CCAFS and Info Notes

The CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) is a strategic partnership of CGIAR and Future Earth, led by the International Center for Tropical Agriculture (CIAT). CCAFS brings together the world's best researchers in agricultural science, development research, climate science and Earth System science, to identify and address the most important interactions, synergies and tradeoffs between climate change, agriculture and food security.

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