



Assessing and enhancing the resilience of the tef and cocoa value chains

Final project fact sheet

The Assessing and Enhancing the Resilience of the Tef and Cocoa value chain (AERTCvc) project is part of the flagship project 'Enhancing Resilience in Food Systems'.

Stakeholders across the tef and cocoa value chains are highly challenged by the occurrence of drought. Their resilience to avoid, absorb, recover and learn from a drought event is low to moderate. Although, all stakeholders do have a certain robustness to avoid drought, they rely almost exclusively on financial resources to absorb, recover and adapt to it. While farmers are directly affected through yield reductions, input suppliers, co-operatives, traders, processors and consumers are indirectly affected by cascading effects. The results and findings of this study highlight areas where intervention is needed to enhance the resilience of the tef (staple crop) value chain in Ethiopia and the cocoa (cash crop) value chain in Ghana. The way forward it to transform the value chains and establish a dialogue between all involved stakeholders.

Motivation

Food systems are increasingly exposed to various types of potential shocks, such as natural disasters, pest outbreaks, economic or political crises. Shocks related to climate change (e.g. drought) and market changes are of growing concern to stakeholders in the tef and cocoa value chains. The emergence of more frequent and intense stresses and shocks challenge the functioning of stakeholders in food systems.

Objective

In both case studies, the objective was to use a transdisciplinary research approach to co-produce knowledge in close collaboration with local stakeholders who are directly involved in the respective value chain. The first step of the project aimed at assessing the resilience of different levels (input supply, production, processing, retailing and consumption) of the tef and cocoa value chains to key shocks. Figure 1 shows the conceptual framework used for assessing the resilience. The second step was to jointly build strategies with key stakeholders to enhance the resilience of the value chains to experienced shocks.

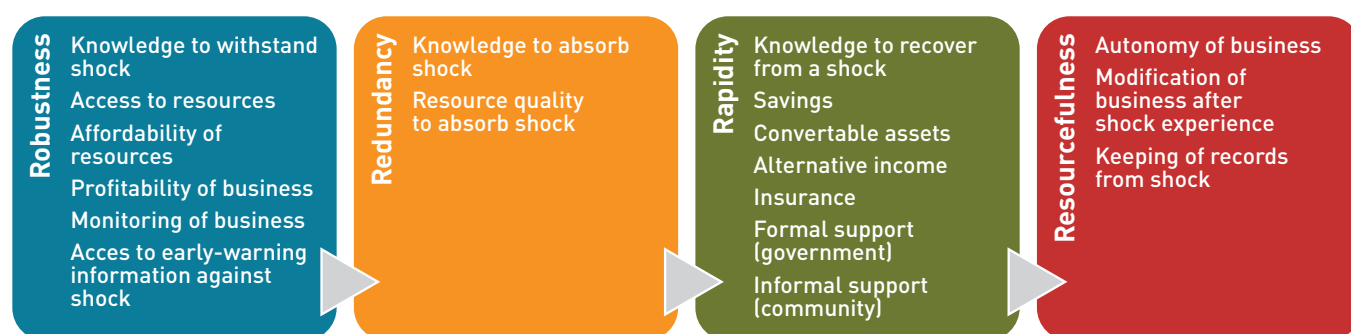


Figure 1: Conceptual framework for assessing the resilience of value chain actors

Research Highlights

Both, actors of the tef and cocoa value chain showed great interest in the topic and supported the establishment of a transdisciplinary platform to develop a bidirectional exchange of knowledge. All actors involved shared the desire to diversify their activities and create new ways to develop added value. Findings of this project showed that tef and cocoa farmers with shock experience (mainly drought and heavy rainfall events) tend to build more resilience to those shocks compared to farmers without previous shock experience. Results from the design-thinking process highlight that all actors are willing to transform their activities: farmers towards implementation of measures that stimulate structural change and give them greater financial independence from farming; traders and processors towards an improvement of their technical facilities to become more competitive on the (international) market. The viability assessment of the jointly defined strategies and action measures to enhance farmers' resilience to drought showed that the implementation does not only depend on the feasibility of the measures, but also on the farmers' motivation to implement them. Results from both case studies showed that farmers perceive a lack of external support from both, government and extension services to implement the proposed measures. The main challenge lies in the limited availability of resources (social, economic and environmental) to implement action measures to build resilience and in an increasing risk exposure and greater uncertainty about impacts of shocks.



Image 1: Preparing the traditional tef-based flatbread injera

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<https://worldfoodsystem.ethz.ch/research/research-programs/CRP/AERTCvc.html>



Image 2: Workshop with cocoa farmers in Ghana

Relevance to Stakeholders

Through this project, different stakeholders from all levels of the respective value chains were connected and brought to the same table to discuss and co-produce knowledge. One of the outputs of the project was the development of action plans to build resilience on the different levels of the value chain. To implement these action plans it is crucial to take into account both, economic-technical and psychological-cognitive aspects. Feasibility and motivation are different for each individual measure, which means that one first has to understand which dimension is most constraining for which measure, and then design the implementation and support accordingly. Making the system more resilient will have positive implications on the well-being of all stakeholders and will reduce the impacts of future droughts and other types of shocks.

Selected Publications

Joerin, J.; Kebebew, A.; Kruetli, P.; Benabderrazik, K.; Hauenstein, S.; Messmer, L.; Lulseged, T.; Dawoe, E.; Tadele, Z.; Six, J. [Resilience of the Tef Value Chain in Ethiopia](#). *Final report*. 2018.

Joerin, J.; Hauenstein, S.; Kruetli, P.; Benabderrazik, K.; Hauenstein, S.; Aning, S.; Asabere, A.P.; Thom, B.; Thompson, W.; Kebebew, A.; Six, J. [Resilience of the Cocoa Value Chain in Ghana](#). *Final report*. 2018.

Messmer, L.; Thom, B.; Kruetli, P.; Dawoe, E.; Assefa, K.; Six, J.; Joerin, J. [Beyond feasibility - The role of motivation to implement measures to enhance farmers' resilience](#). *Paper submitted*. 2020.

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