

*This brief series was developed in preparation for the Foresight Breakout Session of the Global Conference on Agricultural Research for Development (GCARD 2012) and the Global Foresight Hub<sup>1</sup>. The briefs were written to communicate to a wider audience, such as policy makers, civil society organizations, researchers, and funders. The briefs were classified into three categories: Future Studies, Regional Update, and Visioning.*

## No foresight, no food? Regional scenarios for Africa and South Asia

Joost Vervoort<sup>2,3</sup>, Polly Ericksen<sup>4</sup>

Based on the work of the CCAFS scenarios team: John Ingram, Moushumi Chaudhury, Philip Thornton, Wiebke Foerch, Patti Kristjanson, Kasper Kok and the authors with the CCAFS regional teams, IFPRI, IIASA and the Society for International Development.

### What if governments, researchers, the private sector and civil society in East Africa take concerted action towards regional political and economic integration?

What would be the impacts of this kind of future on food security for the region's poor, who live under pressures of climate change? What new challenges would emerge? Could tensions arise from East Africa's assertion of power? What about a future where political and economic fragmentation continues in East Africa and people in power only focus on gains for their own narrow interests? Would there be a backlash and public outcries for change? How will these futures affect adaptation to climate change in the region? Will natural environments bear the burden – either of development or exploitation – in both future scenarios? Most importantly – how would organizations and individuals in the region who aim to improve food security, environments and rural livelihoods navigate these futures?

### Creative strategies for a sustainable and food-secure future

The CCAFS is organizing foresight processes at the regional/sub-continental level in East and West Africa and South Asia. They are headed by the CCAFS scenarios team and supported by CCAFS regional teams. The CCAFS scenarios team is led by the Environmental Change Institute at the University of Oxford, together with CCAFS colleagues. The processes involve the development of scenarios – plausible and challenging alternate future worlds – that explore key socio-economic and governance uncertainties and their impacts on food security, environments and livelihoods up to 2030 and 2050. These scenarios are developed with key regional actors from governments, civil society, the private sector, academia and the media. They are used to:

- test existing policies and strategies developed by state and non-state actors and help develop new and creative solutions for a better future.
- ask big questions: What is the fate of pastoralists in vulnerable regions? What is the value of pro-poor climate change mitigation in the developing world? What are impacts of political developments on diseases such as malaria under conditions of climate change?
- develop regional capacity to understand and work with uncertainty and systems complexity in a changing world, including skills for regional actors to run their own foresight processes and networks of knowledge and action.

<sup>1</sup><http://www.egfar.org/our-work/shaping-future-together/global-foresight-hub>

<sup>2</sup>Environmental Change Institute, University of Oxford

<sup>3</sup>CGIAR CRP7: Climate Change, Agriculture and Food Security

<sup>4</sup>International Livestock Research Institute (ILRI)

## Words, numbers, actions

A holistic systems approach is key for the CCAFS foresight process. This involves exploring food systems rather than agriculture, linking human and environmental systems and developing an understanding of how regional, global and local changes interact.

The CCAFS regional scenarios are developed with a wide range of regional stakeholders across sectors and disciplines who offer important perspectives that help outline future uncertainties and their implications. Through narratives outlining causes and effects between events and changes, each scenario explores the implication of key uncertainties, such as whether state or non-state actors lead regional development or whether short- or long-term issues dominate policies. Each scenario is then quantified using two global agricultural economic models: IMPACT<sup>5</sup>, developed by the International Food Policy Research Institute; and GLOBIOM<sup>6</sup>, developed by the International Institute for Applied Systems Analysis. Translating the narratives into numbers helps regional stakeholders understand the consistency of the logic in the scenarios and their implications. The quantitative and qualitative approaches are complementary: The models mainly focus on demand, supply and trade and commodity prices as well as environmental indicators like water use, land use, input use as well as on malnutrition. The narratives can explore complex regional dynamics not covered by the models such as various implications of governance changes, poverty rates, migration and disease impacts.

Exploring scenarios as plausible futures for food security, environments and livelihoods is valuable in understanding future changes and the challenges and opportunities that they imply for strategic action between key actors (see figure 1). The CCAFS foresight process therefore focuses on using the scenarios. To do this, CCAFS organizes a series of workshops in its regions, where stakeholders come together to develop a shared goal or vision for their region focusing on improved food security, environments and livelihoods. They then work back from this desired future through the different scenarios, in a “backwards planning” process. The different scenarios help stakeholders explore what strategies and policies are needed to deal with future challenges in terms of socio-economic and political change interacting with climate change. This process results in strategies and policy options that are robust under different plausible futures. Together, the CCAFS team and the stakeholders monitor the implementation of these strategies after the workshops.

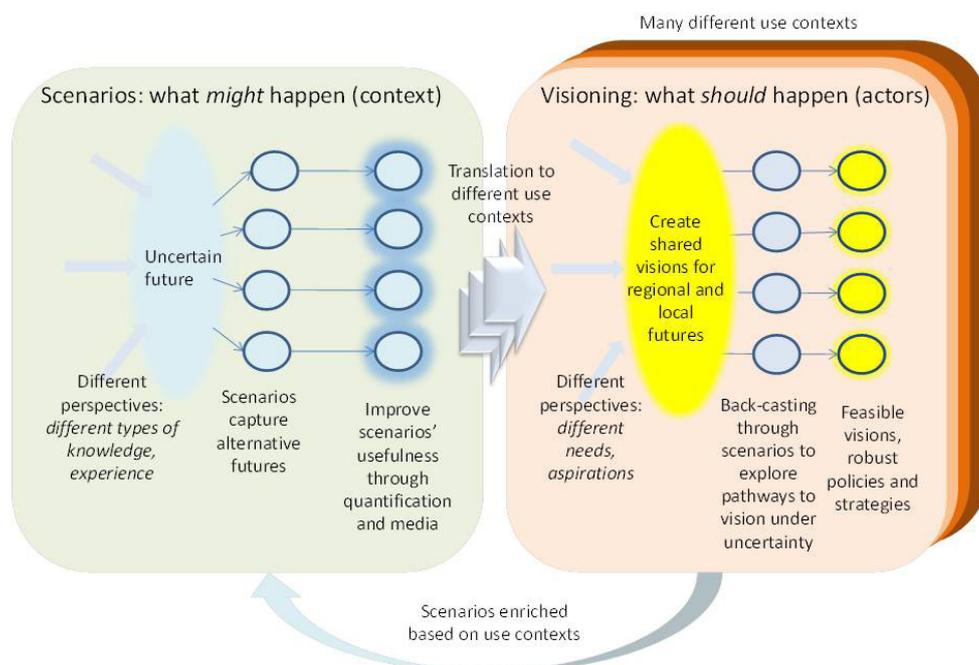


Figure 1. Developing the scenarios and using the scenarios in strategic planning

<sup>5</sup>Rosegrant, M.W., M. Agcaoili-Sombilla and N.D. Perez. 1995. “Food Projections to 2020: Implications for Investment. Food Agriculture and the Environment Discussion Paper no.5.” Washington, DC: International Food Policy Research Institute

<sup>6</sup>Havlik P, Schneider UA, Schmid E, Bottcher H, Fritz S, Skalsky R, Aoki K, De Cara S, Kindermann G, Kraxner F, Leduc S, McCallum I, Mosnier A, Sauer T, Obersteiner M. 2011. Global land-use implications of first and second generation biofuel targets. Energy Policy, 39(10):5690-5702.

### Box 1. Ants, zebras, leopards and lions

As shown in Figure 2, four scenarios were developed in the CCAFS foresight process for East Africa. The scenarios were structured to consider two key uncertainties: 1) Will East Africa integrate politically and economically or will the current fragmented status quo persist?; and 2) Will state and non-state actors take proactive or reactive attitudes to governance for food security, environments and livelihoods?

- **“Industrious ants”** is a world where state and non-state actors are proactive and committed to regionalization. This scenario has many benefits for food security, environments and livelihoods, but new challenges emerge: there is a costly battle with corruption; the region struggles to create autonomous food security; and the emergence of East African power causes conflicts with global interests used to doing what they will in the region.

- **“Herd of zebra”** is a world where regional integration has developed, but the focus is mainly on industrialization and economic growth and little attention is given to food security, environments and livelihoods until crises occur.

- **“Lone leopards”** is a world characterized by fragmented but proactive governments and non-state actors that achieve scattered successes regarding food security, environments and livelihoods; however, there is much mistrust and instability.

- **“Sleeping lions”** is a world that sees self-interested governments and non-state actors turning a blind eye or profiting from regional and international exploitation of land and resources. This leads to public unrest time and time again, but never to structural change.

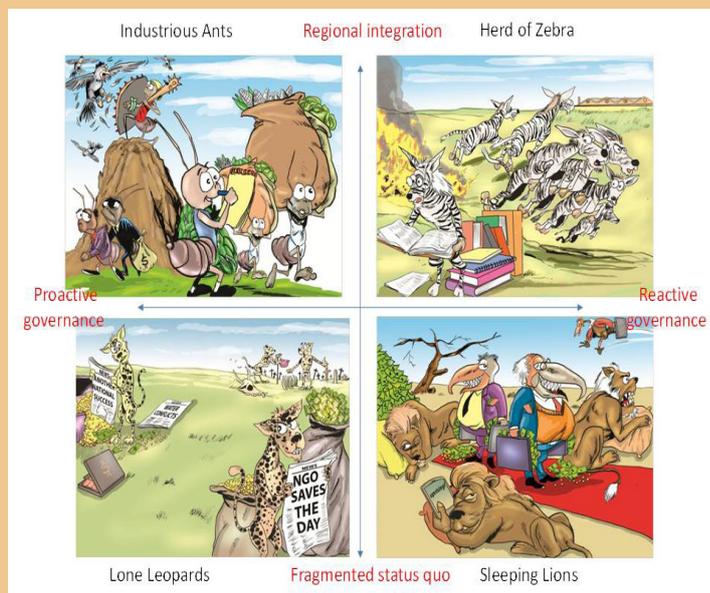


Figure 2. The four CCAFS scenarios for East Africa (illustrated by Kenyan artist Movin Were).

### Future challenges

Although the CCAFS scenarios process is ongoing in East and West Africa and beginning in South Asia, preliminary insights are emerging for food security, environments and livelihoods. These examples apply to both East and West Africa:

- In all scenarios – even the more environmentally friendly scenarios – food security and livelihoods take precedence in policies over environmental health.
- Smallholder farmers focus on other livelihoods, often linked to urban employment. In scenarios with proactive governments, farmers benefit greatly from government information and financial support. In other scenarios, large unregulated economies emerge, offering new but unstable livelihood choices.
- In the scenarios, a wide range of interactions between governance styles and socio-economic and political developments have indirect effects on food security, environments and livelihoods. Examples are political instability, informal trade and migration (i.e. into, out of and within the region and within the different countries).
- The quantitative analyses indicate that even with highly proactive policies, global market pressures and changing populations make it difficult to improve upon the current level of food security. However, these simulations take few of the more structural and indirect implications of the scenarios into account.

### Future farming patterns, land-use changes and links between production and consumption in East Africa

Since the development of scenarios is most complete in East Africa, clear insights for farming patterns and land-use changes are starting to emerge:

- In all East African scenarios, there is a tendency towards increased mixed and intensive agriculture and livestock among small-scale farmers. Pastoralists face difficult prospects in all future scenarios, although they are supported in some.
- In some scenarios, there is a strong focus on balancing support for smallholder farmers with larger-scale food production for regional consumption. Other scenarios focus more on commercial agriculture for export and non-food purposes at the expense of food security.

- Growing populations drive demand for many food products. Demand for poultry and milk increases with changing consumption patterns because of urbanization in the region. These changing demands are most unregulated in the scenarios with reactive governance.

### **Using the scenarios for creative strategies**

In a first strategic planning workshop with civil society and private sector actors in East Africa, the scenarios were used to develop strategies for improved food security, environments and livelihoods in the different future worlds. Insights that emerged from back-casting from desired future goals through the different scenarios mainly concerned relationships with state actors from the perspective of non-state actors.

In scenarios where state actors were proactive and worked on regional integration, non-state actors could develop partnerships with them and develop creative and concrete strategies for improved food security, environments and livelihoods. In scenarios where state actors were proactive but fragmented, effective but more modest consortia were proposed.

In scenarios where state actors were integrated regionally but were reactive to issues of food security, environmental management and livelihoods support, the non-state actors found it challenging to go against this reactivity. However, in a scenario where the dominant governance style was reactive and East Africa was fragmented, non-state actors decided not to “wait” for governments and explored creative ways to harness the potential of civil society toward their visions.

### **Impacting policies, research, local communities and public consciousness**

Impacts are on-going since the process is in mid-development:

- The CCAFS scenarios process is engaging in strategic planning with key regional policy bodies (such as the Eastern African Community General Secretariat in East Africa) as well as with civil society and the private sector and tracking impacts and commitments to change.
- The scenarios process in East Africa has been shown to be successful at linking actors across sectors and building regional capacity to engage strategically with uncertainty.<sup>7</sup>
- A number of projects have also been set up with partners who use the scenarios to explore broad research questions for food security, environments and livelihoods under socio-economic and governance change at the regional and global level.
- A number of projects have also been set up with partners, who use the scenarios to explore broad research questions about food security, environments and livelihoods under socio-economic and governance change at the regional and global levels.
- The scenarios will be applied at policy levels that could impact smallholder livelihoods. They will also be used with local communities to directly explore the feasibility of smallholder adaptation options under regional uncertainties.
- We are undertaking large-scale scenarios dissemination programs with national and regional television, radio, newspapers and many online channels to make the scenarios available for futures exploration by larger audiences.

---

<sup>7</sup>M. Chaudhury, J. Vervoort, P. Kristjanson, P. Ericksen, A. Ainslie. Multi-Stakeholder Scenarios as a Boundary Process: Improving Food Security, Environments and Livelihoods in East Africa under Conditions of Climate Change. Accepted in *Regional Environmental Change*.

#### **Citation:**

Vervoort, J. and Ericksen, P. 2012. No foresight, no food? Regional scenarios for Africa and South Asia. *The Futures of Agriculture*. Brief No. 03 - English. Rome: Global Forum on Agricultural Research (GFAR).

#### **Contact information:**

Author of the brief Joost Vervoort (joost.vervoort@eci.ox.ac.uk). The Brief series coordinator Robin Bourgeois (Robin.Bourgeois@fao.org).

#### **License Disclaimer:**

Creative Commons Attribution & Noncommercial License (BY-NC). Licensees may copy, distribute, display and perform the work and make derivative works based on it only for noncommercial purposes and if they give the author or licensor the credits in the manner specified by these.