



Facing up to climate change

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Social innovation through cooperatives

Development and environment

Economies that are based on agriculture or ranching, with a huge majority of their population working in these sectors, change over time when economic growth proceeds. The primary sectors lose relative and (eventually) absolute importance compared with emerging new sectors such as manufacture and services. The population that, in the early stages of development, is engaged in agriculture leaves this sector once new options emerge.

The World Economic Forum in its 2015 Africa competitiveness report emphasizes the importance of a successful structural transformation. "The slow productivity growth in agriculture is also constraining Africa's structural transformation process and economic diversification. As reported in several studies on structural transformation, reliance on subsistence production and weak productivity growth in the agriculture sector forces the workforce to move out of this sector into manufacturing and services.

Farmers leave agriculture

This implies that not all 570 million farms with 1.4 billion farmers will remain. Most farmers out of necessity want to leave and will leave agriculture in the coming decades. For Agriterra these structural transformations of the economies are a given. From a climate perspective this may be considered as a positive development since most rural dwellers have no or hardly any access to appropriate tools, information and knowledge on good agricultural practices and still depend on farming techniques that strongly contribute to greenhouse gas emissions.¹ like shifting cultivation ('slash and burn' or in general clearing the land with fire) to subsist.

To achieve a rapid structural transformation, paradoxically, a focus on agricultural development and investment in agriculture is paramount. Boosting agricultural productivity therefore implies servicing those that really want to be farmers. Also youngsters with an appetite to farm will stay when agriculture is profitable. All actions to spur agriculture production and productivity should be addressing those farmers with an appetite to farm. The issue becomes: How and where do you find farmers that want to farm and modernize? Since most farmers look need economies of scale to gain a stronger position in the market, value chain and towards a government, many of them have organized themselves in cooperatives and farmer organizations.

Support to cooperatives and farmer organisations helps accelerate the structural transformation away from large numbers of subsistence farmers and creates a leaner agricultural sector with well-developed rural enterprises, good extension services and thus significantly reduce environmentally destructive land use.

¹ Globally, agriculture, deforestation and land-use change are responsible for almost a quarter of greenhouse gas emissions.

Integrated approach through cooperatives

Climate change is a recognised threat to agriculture, particularly in developing countries, where the increased unpredictability of weather patterns and a tendency toward extreme weather events (storms, drought, flooding) pose threats to food security and livelihoods. Farmers are the first to be confronted with the consequences of climate change.

Productivity must improve, despite negative effects of climate change, to ensure food security as well as to make a proper business out of farming.

Cooperatives and farmer organisations are mainly (and understandably) concerned with primary processes such as growth and professionalization but are also ideally placed to implement this integrated approach of new strategies, new systems, new policies and processes and, above all, a new mind-set of millions of farmers worldwide to tackle climate-change.

A strong agricultural organisation is able to assess risks and devise measures for adaptation:

- Good information is vital for planning – every farmer will know, through his or her organisation, the facts of climate change; and research data can be shared with members.
- Cooperatives may have the resources to finance climate adaptation measures (so that farmers don't all have to fund individual start-up costs).
- Measures can be implemented on a large scale through professional extension services reaching the thousands of member farmers.
- Experts can be hired through the organisation, to make recommendations for a sector or particular agricultural area.

Furthermore, those who want to leave agriculture need employment and preferably nearby. Hence, the importance of rural industrialization, which is the natural outcome of a development where farmers are in the lead. They create their own cooperative processing and selling plants. E.g. the Ras Gayint cooperative union in Ethiopia has boosted its sales of various agricultural crops from 300 MT in 3 years to 3.600 MT. By starting hand-selection and cleaning the white pea beans, it could even enter in the premium export market, creating at the same time employment for 200 women.

All of this is cost-efficient. And in the long term, an organisation that responds well to climate change has a competitive advantage: harvests and supplies to (international) companies remain guaranteed and (international) trade with small organised farmers can continue.