



No. 7

GPFS – AT WORK: A (SMALLHOLDERS’) VIEW ON CLIMATE SMART AGRICULTURE

The purpose of this paper is to give guidance on current Climate Smart Agriculture issues for SDC staff and to provide a basis for external communication on the topic.

Changing climate and related variabilities have always led to the use of various coping and adaptation strategies by subsistence oriented smallholder farmers and herders. However, there is a growing recognition that the dynamics of climate change; the magnitude and unpredictability of its effects are outpacing the ability of smallholder farmers and herders to adapt effectively.

Moreover, demand for food in developing countries is expected to grow unprecedented in the coming decades as a result of increasing population size and income. Furthermore, consumption behaviors and business practices in the context of imperfect markets that do not account for externalities are pushing towards practices that are unsustainable. All these factors are deemed to exacerbate food insecurity both in the short and long term unless urgent action is taken.

Agricultural systems depend on sufficient available water and specific ranges of temperature for plant growth, which makes the farming & livestock sector highly vulnerable to climate change and variability. According to the IPCC¹, projected impacts vary across crops and regions and adaptation scenarios, with about 10% of projections for the period 2030-2049 showing yield gains of more than 10%, and about 10% of projections showing yield losses of more than 25%, compared to the late 20th century. At the same time, global agricultural activities and related land use change account for about one third of total global warming from greenhouse gas emissions.

The concept of **Climate Smart Agriculture (CSA)** emanates from the intention to tackle both the challenges of adaptation and mitigation in the agricultural sector while at the same time ensuring an upward trajectory in productivity growth as explained below.

The Concept

Promoted since 2010 by the FAO, Climate Smart Agriculture (CSA) is an approach that seeks to support countries in securing the technical, policy and investment conditions to achieve sustainable agricultural development for food security² under climate change.

The CSA approach aims at addressing simultaneously three intertwined global challenges:

- ✓ Sustainably increase agricultural productivity and incomes in order to meet national food security and development goals;
- ✓ Build resilience and the capacity of agri and food systems to adapt to climate change;
- ✓ Seek opportunities to mitigate emissions of greenhouse gases and increase carbon sequestration.

From a smallholder farmers’ and herders’ perspective, CSA is not without criticism. A substantial number of Civil Society Organizations³ are skeptical about the benefit of CSA approach to smallholders. According to them, CSA lacks any social or environmental safeguards and fails to prioritize farmers’ and herders’ voices, knowledge and rights as key to facing and mitigating climate challenges. There is also a fear that CSA can be used as a cover for pursuing the conventional and unsustainable practices by global giants who hitherto do not have environmentally friendly track records and tend to crowd out smallholders.

Our Understanding

The core idea of CSA is to capture the synergies between "growth", "adaptation" and "mitigation". Whilst simultaneously adapting to climate change, providing mitigation benefits and ensuring sustainable growth in productivity is an attractive concept, we believe "triple-win" is not always for granted. Potential trade-offs between the three concerns and the complexity may limit the cumulative benefits.

For smallholders, climate change **adaptation** and agricultural **productivity growth** is a necessity. There is also a potential to **mitigate** Green House Gas emissions from smallholder farming and livestock husbandry through adoption of particular techniques such as carbon

This series is meant to give guidance and reflects the position of the GPFS.

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¹ Intergovernmental Panel on Climate Change IPCC Fifth Assessment Report, 2014 <https://www.ipcc.ch/report/ar5/>

² Achieving the four dimensions of food security (availability and access to of food, utilization of food for adequate nutrition, and stability of food supply)

³ <http://www.climatesmartagconcerns.info/cop21-statement.html>

sequestration in the soil as well improving soil organic matter; and in the ecosystem overall; for example, through improved cropland and grazing land management; use of more efficient livestock breeds, etc. However, considering the aforementioned trade-offs between the three concerns, we recommend for mitigation to focus on seeking opportunities. No mitigation measures should be imposed where there is a risk they will undermine local communities' survival and smallholders' rights to food security. In promoting CSA, economic incentives or disincentives and market information systems must be dealt with in such a way as to remove market distortions that lead to unsustainable use of resources.

We adopt a broader understanding of the term “resilience”⁴, to include social aspects as described in GPFS@Work No.6. Therefore, we understand CSA as one element of a **resilient system**.

Implications for SDC

For the majority of SDC projects in support of agricultural development, climate adaptation and mitigation are usually considered as potential positive spillovers rather than the main objective. To reach maximum development impact:

- Consider climate change aspects in a more explicit manner in agricultural and food security programmes by including measures that ensure productivity improvement, climate change adaptation; and mitigation as a co-benefit.
- Link it with household and community resilience.
- Address compensation mechanisms for environmental services
- Include research alliances and knowledge networks to valorize farmers' knowledge.
- Strengthen capacities of technical services in integrating adaptation and mitigation in agricultural production systems while also enhancing productivity.

SDC has developed a tool for analyzing whether existing and planned cooperation strategies and activities are at risk from disasters emanating from climate variability and climate change, as well as whether they have an impact on Greenhouse Gas Emissions and/or the environment. This tool, the “Climate, Environment and Disaster Risk Reduction Integration Guidance (CEDRIG)”, provides an opportunity to better link climate hazards and risks in the design of interventions that include adaptation and mitigation in agricultural production. It can, however, be complemented to include overall aspects of agricultural transformation and household livelihoods as in our understanding of resilience⁵ building for food security that addresses the household/community and macro levels of interventions.

Guiding principles

The following guiding principles must be kept in mind when applying the CSA concept.

Context-specific analysis: There is no “one size fits all” approach for a CSA. For effective measures, a detailed contextual analysis is required, including an assessment of trade-offs between the three concerns and an assessment of the potential impact of anticipated climatic variations on the local production and marketing structures.

Demand driven technologies and practices: The portfolio of technologies and practices promoted in CSA must be based on the needs of smallholder farmers and herders of different gender groups with reflection on key innovations that foster the resilience of the involved production systems and economic activities to build up natural, human and social capital in the long-term.

Multi-disciplinary approach and favorable policy environment: Coordinated action is required from the local to the global level, from research to policies and investments, across private, public and civil society sectors to achieve the scale and rate of change required.

Integrated knowledge: Effective measures should build on existing knowledge and good practice of sustainable agriculture combined with technological innovations.

Ensure predictable finance and investment: Commitment by Governments to finance global public goods combined with facilitating local financial services, including risk reduction mechanisms, is essential. This should be completed by private sector finance, and new corporate business models.

⁴ See GPFS@Work No. 6 ‘Resilience’. In our understanding, building a resilient system requires interventions at the production & NRM level; household and community level; as well as at macro level while also integrating these three levels of interventions.

⁵ See GPFS@Work No 6