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“World Food System —
A Contribution from Europe”

Climate Change - A Challenge for Agriculture

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Abstract

As one of the most climate-sensitive sectors, agriculture is under pressure to reduce greenhouse gas emissions and develop sustainable adaptation strategies to counterbalance future impacts of climate change. Estimations show that agricultural productivity in developing countries will decrease substantially due to climate change. It is therefore imperative to identify and institutionalize mechanisms that enable the most vulnerable farmers and local communities to cope with climate change impacts. At the same time agriculture is contributing substantially to greenhouse gas emissions, particularly methane and nitrous oxide.

Consequently, the agriculture division of GTZ (German Technical Cooperation) considers agriculture in this dual role. The programme NAREN (Sustainable management of resources in agriculture) carried out by GTZ on behalf of the BMZ (German Ministry for Cooperation and Development) promotes sustainable agriculture as an answer to adapt to climate change but also to mitigate greenhouse gas emissions and therein supports resource efficient production methods. To enable farmers to adapt to climate change further essential areas of action of the GTZ are support to and/or capacity development for:

- effective water management, including *e.g.* water harvesting methods as well as small scale irrigation;
- agricultural research to strengthen capacities for the analysis of climate impacts and the development of adaptation techniques such as adapted seed varieties;
- development and application of micro-finance and -insurance systems in rural areas to provide an additional safety net.

An example for the successful implementation of participative development of adaptation measures is AdapCC (www.adapcc.org). This Public-Private Partnership (PPP) by the British Fairtrade company Cafédirect and GTZ supports coffee and tea farmers in developing strategies to cope with the risks and impacts of climate change. The farmers are affected by heavy rains, increasing temperatures, or less rainfall because their plantations are often in poor conditions. In many cases they have neither access to technical or financial support nor the capacity to strategically confront future challenges. The main output of this joint three years PPP project was that selected producer groups have created examples of how to strengthen their capability to cope with the impacts and risks of climate change and how to improve their access to respective financial and technical support mechanisms.

Keywords: AdapCC, adaptation, agriculture, BMZ, climate change, GTZ, mitigation

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