## Towards climate-resilient agriculture: the Dutch touch

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The dual relationship between agriculture and climate change is captured in:

- 1) the impacts of climate change on agriculture via, for example, dry periods, salinization, new diseases and plagues. And critically important for a lowlying coastal country like the Netherlands: flooding!
- 2) via greenhouse gas emissions agriculture contributes to climate change. In the Netherlands there are two complementary approaches for agriculture:
- national efforts on climate change targeting the Dutch agrosectors;
- at international level the need to promote food security and climate smart agriculture.

The Dutch approach is based on intensive cooperation between the private sector, scientific institutes and the government: the golden triangle. It is a starting point for the Dutch enterprise policy and agriculture policy. It is also becoming a priority in our development cooperation efforts. A specific feature of our climate change policy is that we encourage linking adaptation and mitigation interventions. An example of this approach is the project "Adaptation to climate change in agriculture in Northern Netherlands". The aim of the project was to develop strategies and action plans for agriculture to adapt to both climate and market changes. The project focused on three questions:

- 1. What are the threats and impacts on arable farming in the region? This is about governance and the strategic choice whether a sector has strategic and future importance. A basic question is whether large investments in adaptation efforts are justified. The learning issue is to not to hang on to present sectors and production systems but also look at the future importance.
- 2. What are the impacts of extreme events and how to identify adaptation measures? Here the focus is on impact and adaptation at field and farm levels looking at the influence of extreme events on crop production. Science and farmers work closely together. An "agro climate calendar" was set up as a tool to deal with estimating the climatic impact on crop or animal production. This phase also identified adaptation strategies.

The Dutch Federation of Agriculture and Horticulture, LTO Noord, together with Wageningen University and research centres.

## 3. How to identify regional and farm level adaptation action plans?

This concerns regional and farm level action plans: identify bottlenecks and challenges, draw up adaptation strategies and action plans and finally ensure the use of proper forms of risk management.

The learning issues are:

- doing things differently (i.e. water management);
- doing different things (i.e. new [robust] production systems).

Food security is important for many developing countries. Besides the importance of markets, a stable food production base, that keeps pace with an increasing population, is crucial for achieving food security. Increasing production also means introducing new, climate-resilient, working methods.

The foci of the Netherlands are:

- facilitate global discussions on agriculture, food security and climate change;
- contribute to concrete actions and excellent preconditions;
- contribute to capacity building via organizing workshops and courses.

Climate change is clearly a global problem and therefore requires a global solution. For that reason, the Netherlands remains committed to contributing to concrete actions and to facilitating international discussions on agriculture, food security and climate change.