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“Competition for Resources in a Changing World:
New Drive for Rural Development”

Adaptation to Climate Change in Agriculture – Roles of Development Cooperation

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Abstract

Adaptation to climate change has become an important development cooperation issue, both at international policy level and on the ground where it must focus on strengthening adaptive capacity of societies and reducing vulnerability of the poor in particular. Developing countries, as a group, are the ones most threatened by the impacts of global climate change. This is true both because many of the poorest countries lie in regions where effects will be most damaging, and because their ability to respond to harmful changes is the most limited.

In agriculture, a critical expected impact of climate change is depression in major crop yields in tropical and sub-tropical regions. Africa may become the region with highest population of food insecure, up to 75 percent of world total by 2080. Arid and semi-arid lands are expected to increase by 5–8%. On the other hand, many adaptation options, including changes in planting dates, tillage practices or adjusted livestock breeds in the short term or improved water management and irrigation systems and diversification in the mid to long term can help to adapt to a changing climate.

In consequence, development cooperation activities must consider carefully the expected impacts of climate change and build in appropriate adaptive measures.

Concrete tasks for development cooperation include support to integrate climate change concerns into decision-making and supporting mechanisms for risk management. This contribution discusses how these issues can be addressed based on experiences from three pilot projects:

- Application of cost-benefit analysis in supporting an adaptation strategy in the Indonesian water sector with a focus on rice production
- Developing index based weather insurance to adapt to increasing drought risks in agriculture in Mali
- Pilot application of climate proofing of development projects in a rural poverty alleviation programme in Viet Nam.

Keywords: Adaptation, Africa, agriculture, climate change, climate proofing, cost-benefit analysis, development cooperation, policy, risk management, weather insurance

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