TOWARDS CLIMATE CHANGE ADAPTATION

Strengthening capacities of farmers to adapt to climate change through land and water management in sub-Saharan Africa

The strategy and action needed to strengthen capacity of sub-Saharan Africa farmers to adapt are challenging given the complex agriculture system and socio-economic setting of the region.
This project aims to identify a set of adaptation possibilities based on land and water management, and test their effectiveness in strengthening community capacity for climate change adaptation.

Climate change

With the evidence for climate change considered to be unequivocal even at community level, action now is considered a prudent insurance. Therefore the need to act and shift towards adaptation through resilient, resource efficient and productive land use management practices is urgent. Adapting to current climate variability is the best initial step in preparing for future climate change.

Farmers action in the areas of land, water, agro-inputs and food losses are already seen as highly likely to constitute a fundamental part of adaptation practices. Focus should be placed on ensuring sustainable use of soil, water and biological resources for strengthening community capacity for climate change adaptation.

Set of adaptation practices

The full set of adaptation possibilities that might occur in climate adaptation scenario at community level are yet to be understood and tested for sustainable agriculture and food security. This project selects a set of adaptation possibilities based on land and water management and test their on-the ground effectiveness in strengthening community capacity for climate change adaptation based on slow on set climatic change.

Such in-depth on-the ground field experiences are called upon as they could be instructive and practically useful in guiding scaling up action. Selected adaptation practices as physical and biological soil conservation measures, water harvesting, livelihood diversification and capacity building are factors deemed critical in strengthening capacities to adapt.

The project contributes to FAO organizations objectives related to countries promoting and developing sustainable land management, coping with water scarcity in agriculture and strengthened capacities to address emerging environmental challenges, such as climate change. It creates modalities to strengthen collaboration across disciplines and organizational boundaries to increase effectiveness.
Project critical elements in strengthening capacity to adapt to climate change

1. Increasing soil health
   In select sites, the project targets building, boosting and managing healthy soils through soil and water conservation measure and practices aimed at increasing productivity. As climatic variability could likely reduce yields over time, any increase in productivity through better soil health and fertility will serve to moderate the impact of climate change on agricultural productivity.

2. Water harvesting/ Water-use efficiency
   Substantial action is required in the case of sub-Saharan Africa to ensure water harvesting, storage and increase of efficiency of an already declining resource. Adapting to climate change will require even more emphasis than is currently given to improving water management in both rainfed and irrigated systems. The project aims to encourage water harvesting, reduce exposure to dry spells, improve infiltration and encourage efficiency.

3. Livelihood diversification
   Capacity to cope in harsh climatic conditions and uncertain markets call for diversification of farming systems. Better soils and water harvesting is the basis for enhanced diversification. The resource base allows building assets through fishing, fruit growing, cover crops that support better diets and nutrition and engagement in cash crops among others.

4. Institutional collaboration/ networking and capacity building
   The project has invested to create a mosaic of partners working together to leverage investment as a key component of adaptation strategies. Management of natural resources will become more complex and involve more people, perspectives and specialized knowledge. Currently, the project is working directly with Ethiopian government, Kenya Agriculture Research institute (KARI), Tanzania Ministry of Agriculture and Food, Morogoro country council, Sokoine Univeristy in Tanzania, three local NGO’s (INADES Kenya, Rangala Family Development Program (RFDP), and Community Research in Environment and Development Initiatives (CREADIS).

Impacts

- Improved food security
- Soil fertility improvements
- Better water management
- Increased resilience
Project sites

In Ethiopia the project will focus on two of the 177 SLM priorities Woredas identified by the government under the SLM framework in the Amhara and Oromiya regions. The selected watersheds lie within the Awash River Basin System.

In Kenya, project activities are in four districts. Two in semi-arid Machakos and Mbeere and the others in sub-humid/humid Bungoma and Siaya districts.

In The United Republic of Tanzania, the project is implemented in Kiroka village within Morogoro District Council.

Over 15,000 households are targeted as direct beneficiaries of the adaptation interventions.

Regional Initiative

In West Africa, though regional synthesis and collaborative engagement, the project seeks to document the extent of risk to the agriculture systems, define opportunities in adaptation and review promising solutions, implemented or planned.

Project technical advisory team

Alemneh Dejene
Senior Natural Resources Officer, NRC - Alemneh.dejene@fao.org

Sally Bunning
Senior Lands Management Officer, NRL - Sally.bunning@fao.org

Jean-Marc Faurès
Senior Water Resources Officer, NRL - Jeanmarc.faures@fao.org

Mohamed Bazza
Senior Irrigation Management Officer, NRL - Mohamed.bazza@fao.org

Contact

Meshack O. Malo
Land and Water Officer
FAO Rome, Italy
+39 06 57055402
Meshack.malo@fao.org

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