



SUDAN

Implementing NAPA Priority Interventions to Build Resilience in the Agriculture and Water Sectors to the Adverse Impacts of Climate Change

LEAST DEVELOPED COUNTRIES FUND	
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Cofinancing	\$3,500,000
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GEF Agency	United Nations Development Programme (UNDP)
Other executing partner	Higher Council for Environment and Natural Resources (HCENR)

Sudan's Initial National Communication process established that average annual temperature will increase between 0.8–1.7 degrees Celsius by 2030 and will be accompanied by increasing rainfall variability, particularly during the rainy season. Agroclimatic zones will shift southward, rendering small-scale farmers and pastoralists living in many parts of the country increasingly unable to sustain current production levels of sorghum, millet, and fodder for livestock. The potential impact of these changes on national food security could be severe, especially for rural livelihoods of small-scale farmers and pastoralists.

These changes in temperature and rainfall patterns represent a priority threat to food security in Sudan's agriculture-based economy. Agriculture, including livestock, provides the primary means of livelihood for more than 80 percent of the population; accounts for almost all of the domestic supply of staple food, sorghum, millet, and animal production; is responsible for more than 70 percent of the national energy consumption in the form of fuel wood and other biomass sources; and is roughly 90 percent dependent on rain-fed agricultural practices.



Some of the root causes for the growing vulnerability of Sudan's farmer/pastoralist communities to climate change include ongoing practices that are not compatible with increasing climatic variability regarding crop selection, water resource management, communal rangeland management, drought preparedness, and household income generation. In addition, there is a lack of awareness, technical capacities, and knowledge to make informed decisions.

Project Activities and Expected Impacts

The major objective of the project is to implement an urgent set of measures that minimize and reverse food insecurity and enhance the adaptive capacity of small-scale farmers and pastoralists to climate change, including variability. In meeting this objective, the government of Sudan has prepared a project proposal that aims to implement key adaptation activities identified in the National Adaptation Programme of Action (NAPA) as urgent and immediate priorities, and that are intimately linked to food security, namely water resource management, rain-fed agricultural production, and rangeland productivity. Specifically, the project includes three components. The first pilots priority adaptation measures identified in the NAPA in five specific rural areas in different vulnerable agro-ecological zones across Sudan. The second aims to strengthen institutional and individual capacities to implement climate risk management responses in the agriculture sector. The third focuses on knowledge management, codification of best practices, and replication.

The priority measures that have emerged from the NAPA consultation for improving food security in the face of climate change include improved water harvesting techniques, heat-resistant plant varieties, new commercial crops, improved small-scale

irrigation techniques, wind barriers, intensification of tree planting along irrigation channels, rehabilitation of vegetation cover, and communal rangelands for enhancing livestock resilience. Village-level microfinance institutions for revolving, risk absorption, and livestock funds are also established in some of the target communities to build adaptive capacity and livelihood resilience.

Building institutional and individual capacity to implement climate change adaptation and risk management involves the implementation of activities that build capacity in federal and state institutions regarding the incorporation of short- and long-term climate change risks into ongoing and future national development planning processes. Additionally, activities should build capacity at the local community level to understand how to respond effectively to changing climatic conditions through early-warning systems and alternative production strategies responsive to the particular food security threat forecasted.

Synergies and Coordination

The adaptation activities are undertaken in close synergy with the National Strategic Plan for Sudan, which provides a framework for focusing and coordinating Sudan's development efforts over the next five years. The project also has strong resonance with two remarkable GEF regional initiatives dealing with sustainable water and land resources management in Sudan: the World Bank/United Nations Development Programme Nile Basin Initiative (NTEAP II) on the one hand, and the TerrAfrica Strategic Investment Program (SIP) on the other hand. The project establishes close links with these two programs by setting up flexible coordination and collaboration mechanisms and knowledge and information sharing, as well as joint programming whenever suitable and possible.

For More Information

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