IWMI International Water Management Institute

PROJECT BRIEF

Developing pathways to climate resilience through the sustainable management of water, land and ecosystems

Most rural and, increasingly, many urban communities in Ghana depend on agriculture for food and livelihoods. Trade in agricultural products supports communities and contributes significantly to the national economy. This makes the country and its people extremely vulnerable to climate change. Recent studies suggest that there is potential for the sustainable intensification of agriculture in Ghana. Since water availability is a key determinant of productivity, water storage and small-scale irrigation have a significant role to play in agricultural intensification. A project by the International Water Management Institute (IWMI) and the United States Agency for International Development (USAID) in Ghana is supporting communities to sustainably manage water, land and ecosystems as a pathway to climate resilience and better livelihoods.

The project is working with communities in four watersheds: two in Ghana (Anyari in the Upper East Region and Bihinaayili in the Northern Region) (Figure 1) and two in Ethiopia (Embahasti in Tigray region, and Yanda in the Southern Nations, Nationalities and People's Region [SNNPR]). The centerpiece was a series of participatory watershed-level workshops involving farmers, government planners and natural resource experts. Particular care was taken to ensure equal participation by men and women and the inclusion of both young and elderly people.

The workshops were built around a facilitated protocol, basically a series of exercises aimed at getting participants to think about the challenges involved in maintaining livelihoods based on ecosystem services; the relationships that affect natural resource management; the effects of climate and other shocks and disturbances on natural resources; adaptive strategies; and influence networks. The goal was for participants to develop a locally owned community resilience action plan, including roles and responsibilities, for managing natural resources and sustaining ecosystem services.

Workshop participants did not start from scratch. The project developed a set of background materials based

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on biophysical and socioeconomic assessments of the watersheds to complement and contextualize the community perspectives gained during workshop sessions. The assessments included the following:

- A review of national policies on natural resources, water and resilience, and current strategies for the local management of watersheds.
- An evaluation of the watersheds in terms of water supply (quality and quantity) and agricultural systems, including demographic data such as population and incidence of poverty.
- An assessment of land use and rainfall patterns.

The protocol was later modified to include an assessment of selected water quality parameters to assist communities, donors and governments in detecting trends over time.

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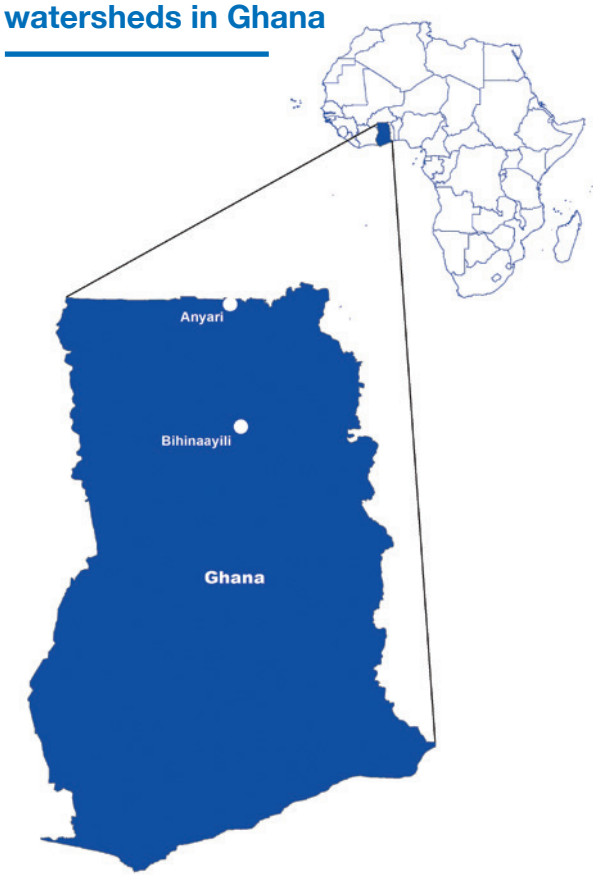
In Ghana, the project analyzed the current state of climate change resilience in the Anyari and Bihinaayili watersheds, and identified data gaps based on information gathered through the assessments and workshops. It concluded that, overall, the watershed communities understand the relationship between their livelihoods and the natural resources that provide them with goods and services. While they have a clear idea of short-term measures that might be taken to deal with climate shocks and stresses, they are less equipped for long-term resilience planning.

The two-year project will conclude in 2017, but its usefulness is intended to live on. Government ministries and regional organizations can adapt their resilience interventions using the tested protocol to develop community-owned action plans. The protocol devised by IWMI and USAID to gather data and analyze the state of resilience in small-scale farming communities to create community watershed action plans can be modified to suit different countries and different contexts. Helping communities to describe and discuss their challenges and to formulate plans to improve their well-being while sustaining ecosystem services is already an important step along the pathway to resilience. Getting there will require tools and approaches (for which the protocol provides a basis) for measuring and understanding the progress towards climate resilience.

Figure 1. Location of the pilot watersheds in Ghana



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