



ACTIVITIES IN INDIA WEST BENGAL



The AgWater Solutions Project

The aim of the project is to identify the factors that influence successful adoption and upscaling of small-scale agricultural water management (AWM) interventions and to provide a set of evidence-based tools and recommendations that support increased investment and policies to improve AWM adoption. The project is being undertaken in two states in India, West Bengal and Madhya Pradesh, and five countries in Africa, Zambia, Ethiopia, Ghana, Tanzania and Burkina Faso. This short update is designed to provide stakeholders with details of the current status of the project, including project activities to date and what is being planned for the future.

Activities to Date

Inception and Midterm Workshops

An inception workshop for the entire project was held in Addis Ababa, Ethiopia, in May 2009. The project plan was discussed and work plan details were agreed for all countries. In January 2010, a midterm project workshop was held in Lusaka, Zambia, which was attended by representatives from each country where the project is being undertaken. The participants reviewed progress, adapted work plans, and further detailed outputs and outreach plans for all countries.

Situation Analysis of AWM Technologies

A Situation Analysis of AWM technologies in West Bengal was conducted in 2009. The purpose of this was to provide

background material on and analysis of:

- Existing environmental, hydrological and climatic conditions;
- National institutional and policy frameworks related to AWM;
- Typologies of existing AWM practices and their geographic spread;
- Key actors who are supporting the development of AWM in the State; and
- Promising AWM solutions that merit further detailed study.

A report based on the Situation Analysis has been prepared. This has been summarized and is available as a **briefing note on the project website**.

Stakeholder Consultation Workshop

A Stakeholder Consultation Workshop was held on February 16, 2010, and attended by around 30 key stakeholders. Three promising AWM interventions recommended for further review at the workshop were:

- Intensive groundwater use in North and South Bengal;
- Rural electrification to make pump irrigation viable;
- In-situ water harvesting through on-farm ponds in western parts of the State, such as in Purulia, Bankura and Medinipur, where groundwater irrigation may not be feasible due to the terrain and natural hydrogeology. A good example of this is the Professional Assistance for Development Action's (PRADAN's) happas.

A workshop report has been written and shared with participants. A two-page summary of this can be found as a **briefing note on the project website**.

Mapping AWM Potential and Solutions in West Bengal

A workshop was held to discuss the out-scaling of promising AWM solutions. The objectives of this session were to:

- Define a typology of livelihood zones in West Bengal;
- Prepare a national map locating the main livelihood zones of West Bengal; and
- Identify the potential of promising AWM solutions in West Bengal for poverty reduction in each of these livelihood zones.

Experts from various relevant disciplines and institutes participated in the session to identify, locate and describe the main livelihood patterns in West Bengal and to discuss the relevance of AWM in relation to rural livelihoods. The initial set of maps prepared during the workshop formed the basis for additional data collection and analysis by the project team.

Field Level Case Studies

Based on the Situation Analysis and Stakeholder Consultation Workshop, the project is carrying out a number of field level case studies, as described below.

Access to pumps and rural electrification

A study was undertaken to analyze how access to pumps and rural electrification have changed since 2004. A survey was conducted in 59 villages spread across 10 Districts from July to September 2010. Of these, 43 were repeated village surveys that were previously surveyed in 2004 and 2007. This rich data source will help in understanding the changes in West Bengal's groundwater economy over the past 5-6 years. The survey will also provide data that can be used to rigorously measure the impact of the metering of electric tube wells on groundwater use and access. Data analysis is currently underway.

Constraints to groundwater access

A second case study examines the constraints to groundwater access. For this study the main actors in the groundwater sector, namely, the State Groundwater Department, the electricity utilities, and private pump dealers, were interviewed. The results of the analysis are currently being compiled into a draft report.

Opportunities and constraints for adoption of AWM technologies by smallholder farmers

The study is assessing the factors that facilitate or constrain either investment in or choice of irrigation technology by marginal and smallholder farmers in a region which has a relatively rich endowment of water resources. The fieldwork was conducted in Mathabanga I, Cooch Behar I and Sitalkuchi blocks of the Cooch Behar District, and the analysis is currently underway.

Watershed Level Case Studies

The project is carrying out four complementary research tasks in the Cooch Behar Watershed in West Bengal to assess the:

- Hydrological impact of current and potential AWM interventions;
- Current land use patterns, including irrigated and rainfed agriculture;
- Current resource-based livelihoods in each watershed and related dependencies on different sources of water, and AWM practices at community and watershed scale; and
- Impact of potential AWM scenarios at watershed scale.

Future Plans

- The detailed case studies will be completed and reports produced in early 2011 on "The pump economy of West Bengal"; "The impact of metering on groundwater access in West Bengal"; "The impact of in-situ and on-farm water harvesting structures in West Bengal"; and "The state of groundwater availability and recharge in West Bengal".
- A further case study is planned on in-situ and on-farm water harvesting structures in Bankura.
- Preliminary project findings will be shared at technical meetings as soon as the draft reports are complete.
- The case studies will be formulated into "solutions" and "business models" with the support of various stakeholders.
- Solutions that are seen as being applicable in several countries will be developed into "investment briefs".
- Stakeholder engagement will continue through a series of consultations to discuss emerging outputs and proposed solutions, and to support the development and implementation of business models.

Stakeholder Engagement Activities and Plans

- The AgWater Solutions Project team is working in close collaboration with two key players in the groundwater sector, the State Water Investigation Directorate (SWID) and West Bengal State Electricity Distribution Company Limited. (WBSEDCL).
- The project team presented some of its preliminary results to the Planning Commission in November 2010, and at a workshop organized by SWID.
- Results will also be presented to the Indian Chapter of the International Association of Hydrologists (IAH) to be held in January 2011.

Key Project Contacts

- Coordinator and project contact point – Dr. Aditi Mukherji, International Water Management Institute (IWMI)
- Project Ambassadors for India - Mr. P.S. Vijay Shankar, Samaj Pragati Sahayog, India; Mr. Manas Satpathy, Professional Assistance for Development Action (PRADAN), India; and Dr. Mercy Dikito-Wachtmeister, Global Water Partnership (GWP), Sweden

For more information and copies of the briefing notes mentioned in this update, please see the country page on the project website:

<http://awm-solutions.iwmi.org/india.aspx>

If you would like copies of any of the reports mentioned in this update please contact the Project Secretariat (awmsolutions@cgiar.org)

