

Bangladesh

# Arsenic Mitigation Program

Study period from November 2007 to February 2008



## Summary of the Evaluation

An internal evaluation using JICA's program evaluation method was conducted of the ongoing Arsenic Mitigation Program in Bangladesh. The study considered the realignment of the program and JICA's future cooperation policy.

This program is characteristic of its comprehensive structure. It in-

cludes grant aid, grassroots grant aid, and a Japan Debt Cancellation Fund (JDCF) project, in addition to the original JICA project. The study confirmed the effects of coordination with other donor initiatives, and holistically examined the outcomes of JICA's cooperation for Bangladesh's arsenic mitigation measures.

## Background and Objectives of the Evaluation

In Bangladesh, groundwater arsenic contamination poses a significant threat to the livelihood of the rural poor. The Bangladeshi Government formulated the National Policy for Arsenic Mitigation (2004) and aimed to resolve the arsenic problem. The need for arsenic mitigation measures is specified in Japan's Country Assistance Program for Bangladesh, the assistance policy of the local ODA task force, and JICA's assistance policy, respectively. Since 2000, JICA has dispatched experts, and has conducted a development partner pro-

gram, technical cooperation project, and grant aid project. Against this backdrop of assistance and assistance policy, JICA established the Arsenic Mitigation Program in FY2006.

This study was conducted one fiscal year before the target year of the program and its main objectives was to examine the outcomes to date, and to derive recommendations and lessons learned on improving program operations and management with a view to achieving the program goal.

## Program Overview

**Program objective:** To enhance the system for providing a safe and stable supply of drinking water in rural Bangladesh.

**Target year:** FY2009

**Program area:** Nationwide (the countermeasure implementation component primarily concerns the western region)

**Specific outcome (objective):** Build a system for supplying safe water to approx. 1.3 million people in four western provinces (including outcomes of Bangladeshi Government project using JDCF).

**Goal:** To supply safe drinking water to arsenic contaminated areas.

**Program components:** The program consists of three mutually

complementary activities. They are: 1) Policy assistance to the central government; 2) Implementation of field measures; and 3) Capacity building for water quality analysis and monitoring, a basic arsenic mitigation measure.

**Evaluation period:** From FY2002 to 2009.

**Projects subject to evaluation:** Of the projects implemented during the above period, the projects which were already completed or were on-going at the time of the evaluation (March 2008), and those for which implementation preparations had begun.\*1

### Program Components

	Project Title (Scheme)	Period*2
1. Policy assistance component	Arsenic mitigation advisor (Local Government Division) (individual expert)	October 2000 – October 2002, July 2004 – July 2008
	Arsenic mitigation advisor (Department of Public Health Engineering) (individual expert)	December 2000 – November 2006
2. Countermeasure implementation component	Mobile Arsenic Center Project (development partner)	January 2002 – December 2004
	Sustainable Arsenic Mitigation Project (proposal type technical cooperation project)	December 2005 – December 2008
	Implementation of Arsenic-free Safe Water in Selected Villages of Jhikorgachha Upazila, Jessore, Bangladesh (grassroots grant aid)	April 2007 – March 2008
	Project on Rural Water Supply in South Western Part of Bangladesh (JDCF project)	2008 – 2012 (planned)
3. Water quality analysis and monitoring system development component	The Project on Strengthening of Water Examination System (grant aid)	FY2004 – FY2005
	Project for Strengthening Capacity for Water Quality Analysis and Monitoring System (technical cooperation project)	2008 – 2011 (planned)

\*1. As the start of the activities implemented in FY2002 dates back to the introduction of experts (arsenic mitigation advisor) in FY2000, the actual evaluation period is from 2000 to March 2008.

\*2. Period that was confirmed when this evaluation study was implemented.

## The Framework and the Policy for Evaluation

An evaluation using JICA's program evaluation method was conducted. This evaluation confirms the program's: 1) consistency with the development strategy of the counterpart government and Japan's assistance policy; 2) strategy (consistency and outcome); and 3) contri-

bution (possibility) from a qualitative standpoint. Based on the aforementioned analyses, the evaluation: 4) makes recommendations about the program's remaining implementation period and derive lessons learned from the program's outcomes.

## Evaluation Results, Lessons Learned and Recommendations

### ► Evaluation results

The program is clearly aligned with Bangladesh's Implementation Plan for Arsenic Mitigation. The program's cooperation approach corresponds with the major items of the Plan and is highly relevant. The program is highly relevant also in the context of Japan's international cooperation strategy, international water and sanitation trends, Japan's initiatives, and JICA's policy and its consistency is also being maintained. The program scaled up its outcomes, while maintaining coordination between program components and with other supporting organizations (e.g., Bangladeshi Government, donors, NGOs). The program scenario aimed at the achievement of the Implementation Plan for Arsenic Mitigation is highly strategic.

The alternative water supply option and approach that the program introduced are appropriate in technological, social, and economical point of view, and are highly regarded by Bangladesh. Mechanisms are being put in place to make the system more widespread, and it is producing outcomes.

On a per program component basis, the following outcomes were achieved. The policy assistance component supported the necessary R&D of the Local Government Division through the dispatch of experts, provided technical assistance, and contributed to the establishment of a central laboratory. Under the countermeasure implementation component, a development partner assistance project and private-sector proposal type technical cooperation project were conducted with the Asia Arsenic Network. The projects led to the implementation of a community-led sustainable arsenic mitigation measure in two parishes in western Jessore, with the support of government institutions. In western Jhekorgacha parish, an alternative water source was established with financing from grassroots grant aid. However, the commencement of the Project on Rural Water Supply in South Western Part of Bangladesh a major project of the program was delayed. For the water quality analysis and monitoring system development component, the grant aid project was implemented on schedule. In preparation for the start of the Project for Strengthening Capacity for Water Quality Analysis and Monitoring System, central laboratory personnel were being assigned and trained.

In general, the component projects were implemented as planned. Due to the delayed start of the Project on Rural Water Supply in South Western Part of Bangladesh however, the initial target year (FY2009) needs to be revised.

### ► Recommendations and lessons learned

Many people continue to face the risk of arsenic contamination. And thus, it is advised that the program continues to take arsenic mitigation measures while mainstreaming the program into water and sanitation sector programs analogous to the Bangladeshi Government.

Additionally, it is preferable for the cooperation policy to be shifted from technical development assistance and sustainable pilot development assistance in rural areas, to assistance in developing more highly versatile program centered on local resources. The cooperation approach needs to be restructured to give further emphasis to policy assistance.

As to how JICA's cooperation will continue after the program's termination, JICA should consider activities that have an exit strategy and at the same time ensure the continuous delivery of outcomes, e.g., support the collection of fundamental information on arsenic contamination using local resources.

### The lessons learned are the four items below:

- It was shown from this program that in cases when numerous constraining factors hinder the capabilities of local governments it is realistic to promote decentralization through a specific problem-solving approach, i.e., provision of safe water.
- External factors need to be carefully considered (e.g., JDCF project, counterpart government's funds and manpower, procedural delays).
- It is important that the program is able to capture the outcomes' spillover effects (e.g., documentation of knowledge, human resources development and capacity building, development of institutions). The exit strategy should take into account local stakeholders: administrative agencies, local NGOs, and private organizations.
- The importance of problem-solving and interdisciplinary techniques like water supply techniques that can be maintained and managed at the community level, and techniques to select the most appropriate water supply technology for the target area was clarified through implementation of the project.



A patient diagnosed with arsenic poisoning (Sustainable Arsenic Mitigation Project)