

CHANGE, IMPACT, SUSTAINABLE DEVELOPMENT

HOW THE ISLAMIC DEVELOPMENT
BANK GROUP IS IMPROVING
PEOPLE'S LIVES

WATER AND HEALTH

RELIEF TO CYCLONE-
PRONE COASTAL AREAS
OF BANGLADESH

6



2020

INTRODUCTION

"It is very important if you can supply a glass of water" – Mohamed Anwar Eusufin could not put it any more clearly. A Superintending Engineer for the Bangladesh Department of Public Health Engineering (DPHE), Md Anwar is talking about the momentous task to do just that – to provide safe drinking water during the cyclones and other natural disasters regularly faced by people living in Bangladesh's coastal areas. This IsDB-supported project has helped in vital ways, including literally bringing water, through mobile water treatment plants, but also by protecting sources of supply from saltwater incursions, and promoting improved sanitation to protect public health.

THE CHALLENGE

Every cyclone that drives in seawater and contaminates the Bangladesh coastal population's scarce resources of 'sweet water' is a humanitarian emergency. In 2007, Cyclone Sidr was the second natural disaster to affect Bangladesh in 12 months and, in 2019, Cyclone Bulbul claimed lives, caused injuries and forced some 2.1 million people across Bangladesh to relocate.

Cyclones are nothing new – people have lived for hundreds of years in the flood-prone coastal regions of Bangladesh – but the challenges have increased. Md Anwar says that, "200 years ago, people of this region used to take water from the pond" (this source of low-saline water remains central to the project today), but with the pressures of population and development and increased frequency of natural disasters, the ponds have steadily deteriorated. Intervention was needed to restore ponds and install tube wells, while protecting them against seawater ingress. Education to improve hygiene, and improved sanitation, were also critical to protect people from waterborne diseases.



THE PROJECT

This project focused on addressing these issues for the coastal population of the Bay of Bengal. The main goal being to provide safe drinking water, through development of better infrastructure, and improved hygiene and sanitation, to reduce the risk of waterborne diseases and environmental hazards resulting from cyclones and flooding. Side benefits were increased availability of clean water for more people and improved monitoring of water quality. The piloting provided also helped the DPHE to massively scale up protective interventions elsewhere in coastal Bangladesh.

The key work of the project, as explained by former DPHE Chief Engineer Mohamed Rashidul Huque, who was project director, was to install tube wells, drawing water up from the shallow groundwater aquifers, and to put “the pump, the head of the water sources, a little up from the ground level – three feet up from the ground level – so that those do not inundate [with seawater] during natural disasters.” This was done by including raised platforms in the design of the water points. As well as protecting the water sources for safe consumption, these platforms help people to gain safer access.

Over the course of the project over 8,500 water points were installed. The project also supplied 8 mobile treatment and desalination units; utility vehicles; tools and equipment; 960 water-testing kits; and established a laboratory for water testing. Training was also a key factor, both for operation and maintenance of the infrastructure and for monitoring and surveillance of water quality (81,500 caretakers trained). Training and education of the beneficiary communities on good hygiene practices and the use of the new sanitation facilities were also critical to the effectiveness of the project (900,000 community members trained). These social-mobilization and community-participation activities aimed to bring about behavioral changes.

RESULTS

The project increased the coverage of safe water supply and sanitation to a region affected by regular seawater flooding (a problem that climate change will only make worse). The new waterpoints reduced the average number of people sharing a point from 98 to 82 – a 20% improvement – and also directly contributed to increasing the average national coverage of rural water supply. Over 2,500 skilled and semi-skilled job opportunities were created locally during construction and operation. Water quality improved, too – for example, an 80% increase in the number of water samples free of arsenic. Sanitation coverage increased from 60% to 75% of households. Overall, the health improvement brought by the better and expanded water supply and sanitation directly benefited 1.5 million individuals. Md Anwar sums it up: “there were no cases of diarrheal disease, such as cholera” thanks to the clean water supplied through this project by his 100-strong team. What greater impact can you want than saving lives?

THE AVERAGE NUMBER OF PEOPLE HAVING TO SHARE EACH WATER POINT DECREASED FROM

98 TO 82

WATER QUALITY IN THE PROJECT AREA IMPROVED. FOR INSTANCE, THE NUMBER OF WATER SAMPLES FREE OF ARSENIC

INCREASED BY 80%





LESSONS LEARNED

The work to improve water supply and sanitation was highly replicable and sustainable. Especially with climate change making its presence felt, the project's practical solutions against seawater flooding could be replicated in countries with similar challenges.

Selection of an appropriate location and water supply technology is critical to the meeting of intended outcomes. Community participation is also crucial during project design and implementation to ensure that the needs of the community are met and that the infrastructure will be used and maintained correctly. Similarly, the use of local contractors facilitates successful implementation and builds capacity. The full potential of health benefits to the community is only achieved if provision of the water supply is accompanied by meeting basic sanitation demands and promoting hygienic behavior change.

There was significant motivation on the ground for this project, but success in the solutions provided or kickstarted by the project relies on the responsibilities of the DPHE being met with adequate and timely financial resources. And the medium- to long-term sustainability depends on beneficiaries being able to shoulder operational and maintenance costs.



INCREASED ACCESS FOR

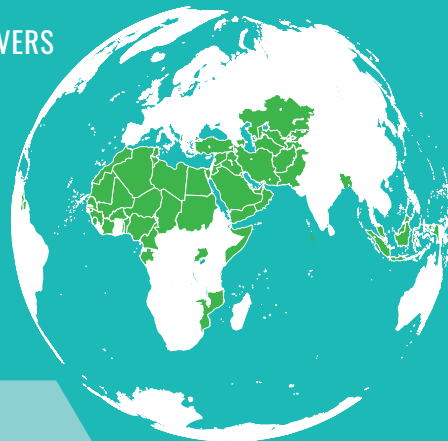
1.5 MILLION

PEOPLE IN THE PROJECT AREA TO SAFER WATER AND SANITATION

ISDB MEMBERSHIP COVERS

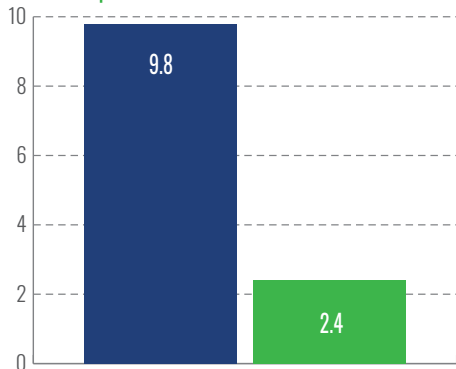
57

COUNTRIES SPREAD OVER 4 CONTINENTS



TOTAL PROJECT COST

US\$12.2M



CONTRIBUTIONS¹

● ISLAMIC DEVELOPMENT BANK

US\$9.8M

● GOVERNMENT OF BANGLADESH

US\$2.4M

¹ Rounded US\$ estimates of actual costs in Islamic dinar.

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"[The IsDB project and further efforts by the Government of Bangladesh since] are very important in the Bangladesh context. The Government and the people are thinking to use surface water in the area, and accordingly we have benefited [from the improvements in the water facilities and people's water and sanitation practices]."

Mohamed Anwar Eusufin, Superintending Engineer,
Bangladesh Department of Public Health Engineering (DPHE).



TRAINING LOCAL CARETAKERS IN OPERATION AND MANAGEMENT, AND MONITORING AND SURVEILLANCE, WAS KEY FOR PROJECT SUSTAINABILITY

THE PROJECT CREATED

2,500 JOBS

DURING PROJECT CONSTRUCTION AND OPERATION

8,500

WATER POINTS INSTALLED OR IMPROVED TO PROVIDE SAFE WATER AND PROTECT AGAINST INUNDATION FROM SEAWATER AND FLOODING

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