

The Maldives First Regional Development Project



MacAlister Elliott and Partners lead a consortium of three companies selected by the government of Maldives and the Asian Development Bank to implement the First Regional Development Project in Maldives. The Consortium partners are OPTI of New Zealand and Business and Finance Services (BFS) of Maldives

BACKGROUND INFORMATION

Project Description

The project will provide for more equitable development of Maldives through focused regional efforts in a northern development region (NDR) and a southern development region (SDR). The institutional, infrastructure, and environmental improvements will provide a better standard of living for the people in these regions, who are distant from the capital Male', recipient of most development in the past.

The Project will benefit directly, with a better standard of living, a population of 19,000 in the nine focus islands of NDR and 21,000 in the four focus islands of SDR, but more than 100,000 people residing in the NDR and SDR will benefit from the RDMOs by having the opportunity to influence what development takes place on their own islands.

The project is needed to improve the living conditions of the people in the NDR and SDR and thus will act as a catalyst for economic growth which will in turn bring employment. It is the first major thrust to implement the Government policy of equitable development.

The population of Maldives was around 267,000 in 1998, spread among 200 inhabited islands (1,000 islands are uninhabited). About 63,000 people or 24 percent of the population live on the island capital Male', one of the most densely populated places in the world, with 360 persons per hectare. The NDR which consists of Haa Alifu, Haa Daalu, and Shaviyani Atolls has a registered population of about 45,000, and the SDR, which consists of Gaafu Alifu, Gaafu Dhaalu, Gnaviyani, and Seenu Atolls, have about 56,000. In recent years, the population has increased at an average of 2.8 percent per annum. There is a pronounced inward migration trend from the atolls to Male' as people search for employment and better education. Those living outside of Male' depend on fishing, agriculture, and other primary industry-related activities of their livelihood. Many families depend on money transfers from the family members employed in Male' on tourist resorts in the central region, or in the case of NDR, remittances from sailors abroad.

The Project Scope

The Project aims to provide the focus for regional development in the NDR and SDR thereby supporting more equitable development in the country and taking some of the pressure off Male', the capital.

The project will improve the living environment of the inhabitants of 13 focus islands: Baarah, Dhidhdoo, Filladhoo, Hanimaadhoo, Kelaa, Kulhudhuffushi, Kumundhoo, Nolvivaram, and Nihivaranfaru in NDR and Feydhoo, Hithadhoo, Maradhoo, and Maradhoo-Feydhoo in SDR. The project includes construction of permanent regional development and management offices (RDMOS) in both Kulhudhuffushi and Hithadhoo, training local staff, upgrading of a 17-km road from Gan to Hithadhoo, upgrading of streets in urban areas of the focus islands, provision of rain water collection and storage for 2000 individual households in both the NDR and SDR, provision of appropriate technology solutions to sanitation for 1000, individual households in the NDR, construction of a 70-metre (m) bridge and 200 m culverted causeway in SDR (for environmental reasons); provision of solid waste disposal, septic tank desludging, and the setting up of permanent environmental monitoring of the freshwater lens, coastal geomorphology, and marine ecology of the 13 focus islands.

Institutional Improvements

RDMOs will be established in Kulhuduffushi (NDR) and Hithadhoo (SDR). These offices will have four major functions:

- development planning;
- coordination with the central government agencies;

- management of contracts for provision of services in the region; and
- maintenance of a database on resources within the region, including human and natural resources.

The Project will provide the building, equipment, furniture, vehicular and boating support, and training of staff, and operating expenses on a declining basis for the first three years. This component will also include a community education and participation program (CEPP).

Social Infrastructure

The Project includes the enhancement of rainwater collection for water supply and a pilot project for better sanitation. The rainwater collection component will include assistance to individual families by provision of credit for new roofing (up to a maximum roof area of 50 square meters) and for the purchase of rainwater storage tanks. The sanitation component will include technical assistance and credit to individual families in the NDR to construct on-site sanitation units using appropriate technology as well as a pilot community project using a sewerage system. Credit repaid by individual households will be utilized for a social development fund of which 50 percent will be for income-generating projects and the balance for social infrastructure projects. Equipment for sludge removal from existing septic tanks will be procured for each region.

Physical Infrastructure

A 17 km road from Gan to Hithadhoo in the SDR will be constructed. The main requirement is the procurement of appropriate filling materials (to be sourced from the dredging for the port expansion). The road alignment will follow the eastern lagoon side of the island chain with a minimum standard of not less than 7.4 meter crowned surface with appropriate drainage. The physical infrastructure component will include the purchase of equipment for road maintenance units in the NDR (Kulhuduffushi) and SDR (Hithadhoo). Provision will also be made for restoration of the street surfaces in each of the built-up areas and for appropriate drainage. Location and construction of infrastructure under the Project will follow the Bank's Environmental Guidelines for Selected Infrastructure Development Projects.

Environmental Improvements

Improvements will include

- major coastal protection in the SDR to support the road construction on the lagoon side, and construction of a bridge and a causeway with culverts to replace portions of existing causeways where the flow of water between ocean and lagoon has been inhibited;
- solid waste management in the focus islands of the SDR and in Kulhuduffushi in the NDR involving the purchase of equipment;
- environmental investigations and monitoring of the quality and quantity of the freshwater lens;
- environmental monitoring of the focus islands' coastline for erosion and sedimentation processes, using aerial photographs and satellite imagery; and
- environmental monitoring of the marine ecology in the waters surrounding the focus islands by means of underwater video traverses.

The Project also includes assistance to the Government in project implementation, consultants for design and construction supervision, and backup support of vehicles and boating. Assistance will be provided for a study of the sea transport requirements of the NDR, initial groundwater investigations, and the preparation of comprehensive land-use master plans for the focus islands.

The Project Area

The NDR and SDR were chosen because both had the potential for establishing the critical mass needed for economic growth. Focus islands were determined primarily on the basis of population where implementation of development could be the most cost-effective.

The NDR is serviced by a domestic airport at Hanimaadhoo but at present there are no hotels or other facilities servicing international tourists, nor are there any resorts. Yachting tourists, however have shown interest in Uligamu in the Haa Alifu Atoll and there are proposals for a marina to be built in the atoll. In the virtual absence of tourism in the NDR, fishing predominates, as a primary economic activity and agriculture as a secondary economic activity, but the dominance of fishing or agriculture varies from island to island,

e.g., Kela specializes in growing bananas, papayas, and sweet potatoes. Rainfall averages 2,000 millimetres per year but the NDR does experience drought conditions for up to three months at a time. Coral is still widely used for building purposes. The harbour at Kulhuduffushi is protected and caters to fishing, cargo, and passenger boats. It has a small boat building industry. Out of the 9 focus islands in the NDR, 24 hours of electricity is available on three islands where the service is provided by the State Electric Company Limited, four islands have electricity provided by a private party and electricity is available for 12 hours and one island has no electricity at all. The telecommunications company Dhiraagu, has provided telephone services to all focus islands and Kulhuduffushi, has also a media centre. The Northern Secondary School, which opened in Kulhuduffushi in 1998, was the first secondary school in the NDR. The first regional hospital in the country was also established in Kulhuduffushi and this has recently been replaced with a new hospital. The social profile of the NDR is notable for a large absence of adult males who work as seamen, or in Male', or on tourist resorts. Kulhuduffushi has a variety of employment, while the other focus islands have much more limited opportunities. Average household income is around Rf2,500 (or \$200) per month of which 10 percent is spent on power bills. The expressed needs of the people center around health, education, and youth recreational facilities.

The SDR is serviced by a domestic airport at Gan which also has a 175 bed tourist hotel and a few garment factories. There are preparations for the nearby island of Villingili to become a privately operated tourist resort. Tourist attractions include the chance to mix with the local people and the availability of cycling as a means of touring five islands. A dive center operates and a range of excursions are offered. Seenu Atoll has not been a tuna fishing atoll in the way many other atolls in the Maldives have been. This is due to the lack of tradition of live bait pole and line fishing, and the seasonal shortages of bait. There are four fishing vessel harbors in the atoll including those at Feydhoo and Hithadhoo. The harbor at Hithadhoo will be primarily a cargo port with a large reclaimed area with potential for shore-based infrastructure such as ice plants, cold storage, and fish processing facilities. Among the focus islands of the SDR, only Hithadhoo has any agriculture potential. Coconuts are common as garden trees and in plantation form. Taro, sweet potato, finger millet, and yams are grown. Most home gardens grow bananas and mangoes. Tomatoes are also grown commercially in Hithadhoo. The focus islands all have electricity and telephone services. A large secondary school has recently been built at Hithadhoo under World Bank funding and there is also a good regional hospital on the island. The absence of adult males is even more pronounced in the SDR than in the NDR. The education of those from the SDR is generally better than from most other parts of the country, especially in terms of literacy in English. Therefore, the opportunity for jobs in Male' or on resorts is higher than elsewhere. Average household income is similar to the NDR (Rf 2,500 per month). The expressed needs of the people center around employment, better streets and roads (currently an environmental hazard due to poor drainage), the shortage of land, and cleaning up the environment

The approximately 17-km road that runs from Gan to Hithadhoo in the SDR is in reality only a road interconnecting the island communities. Within these communities a well structured street pattern exists and the road takes any number of paths depending on the state of the surface of the streets. Due to lack of maintenance and little drainage, the streets are heavily potholed and retain water from rainfall for several days, making both pedestrian and vehicular traffic difficult. There is a need to relocate the road to the lagoon coastline so that through traffic does not inconvenience the settled areas. Community pride and responsibility for their environment mean most people maintain the street outside their property by purchasing and spreading coral chips. Major repairs are undertaken by the Ministry of Construction and Public Works (MCPW) and paid for out of the Government budget, which cannot always provide sufficient funds. Kulhuduffushi in the NDR has only about 50 vehicles, but a well laid out pattern of streets. As in the SDR, the streets are heavily potholed and retain water for hours after rain.

Neither Kulhuduffushi nor the Gan-Hithadhoo stretch of islands have piped water supplies or piped sewerage. For water supplies, they rely on collected and stored rainwater for drinking and cooking, and on wells for bathing and washing. In Kulhuduffushi, both the community and households collect and store rainwater, whereas in Gan-Hithadhoo only households do so because the annual rainfall pattern is more uniform. Sanitation is affected partly by pour-flush latrines connected to septic tanks (about half) and partly by use of holes in the backyards that are dug and covered after use. The freshwater lens, underlying each island, shows indications of pollution both from both salinity and fecal conformers. While it is not yet at a level to cause alarm for washing and bathing purposes, it is of concern for those who cannot afford rainwater collection and storage facilities, as their alternative is to use well water for drinking and cooking purposes - and the water is not always disinfected by boiling or chlorination. There is also concern about the extent of electric pumping of well water, and where septic tanks have been used, the design, construction, and maintenance have not always been appropriate nor adequate. Monitoring of water levels and water quality in wells is needed.

There are designated solid waste dumpsites used by the public, but they are just places where people leave their rubbish to be scattered by pedestrian traffic, wind, animals, etc. There is no organized waste

management. Kulhuduffushi is untidy with a lot of rubbish on the periphery of the settlements and on vacant plots of land; wheel barrows are used to cart refuse away from households on a daily basis. There is no attempt to reuse or recycle, even though much garden rubbish such as clippings, twigs, and branches could be turned into soil additives. In the Gan- Hithadhoo area, the official dumpsites are too far from the communities and are rarely used. Unofficial dumps spring up making an unsightly and malodorous environment, that people complain about, but it is a problem they have not resolved. Some bury their rubbish on their properties. Generally, there is an urgent need and demand for a well managed waste disposal system.

Implementation

The executing agency will be the Ministry of Finance and Treasury. A Project management unit under the Ministry of Planning and National Development will be set up in Male' and Project Implementation Units in each of the RDMOs at Hithadhoo and Kulhuduffushi. The Project is expected to commence on January 2000 and be completed on December 2004 for a total duration of 5 years.

THE MEP/OPTI/BFS CONSORTIUM

A. Objective

The objective of the consulting services is to assist in the implementation of the project including training of counterparts.

B. Scope of Consulting Services

The consulting services scope of work are: -

- 1 .To establish the RDMOs in the NDR and SDR, so they are capable of
 - development planning,
 - coordination with central government,
 - managing contracts and
 - maintaining a database on human and natural resources.
- 2. To design and implement a community education and participation program.
- 3. To assist in the design, tendering and construction supervision of the physical components of the project including: -
 - the 17-km road, the bridge and causeways, the coastal protection works, the street improvements and the procurement of equipment for road and street maintenance.
 - the rainwater collection and storage facilities
 - the individual household and community sanitation facilities
 - the procurement of septage collection vehicles
 - the procurement of solid waste management equipment
 - the procurement of vehicles and boating for the RDMOs
 - the procurement of environmental monitoring equipment
 - the drilling for groundwater monitoring
 - the drilling for bridge investigations
- 4. To assist the RDMOs in letting contracts for
 - solid waste management
 - septage collection and disposal
 - road and street maintenance
 - environmental monitoring
 - sewerage maintenance
- 5. To train all associated counterpart staff
- 6. To assist in project management, including records and reporting
- 7. To develop the land-use plans
- 8. To undertake initial environmental investigations and monitoring
- 9. To assist in setting up and implementation of the social development fund
- 10. To conduct the sea transport study in the NDR

MEP/OPTI/BFS CONSULTANTS

1. The fields of expertise of the international consultants will be as follows:

Position	Person-months
Assistant to the chief executive officer of each regional development and management office (RDMO)	24
Land Use Planner	4
Solid Waste Specialist	3
Groundwater Specialist	3
Marine Ecologist	2
Road Design Engineer	3
Civil Engineer	24
Water Supply and Sanitation Engineer	3
Bridge Design Engineer	3
Sea Transport Economist	3
Information Systems Specialist	2
Environmental Monitoring Specialist	4
TOTAL	78

A total of 40 person-months of domestic consultants services has been allocated in the fields of administration, computers, public awareness, health, engineering, environment and audit.