

Maldives

Country Briefing Paper

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**Pacific Regional Consultation Meeting on Water in Small Island Countries
Sigatoka, Fiji Islands, 29 July – 3 August 2002**

Country Briefing Paper

MALDIVES

**Maldives Water & Sanitation Authority
Male', Republic of Maldives**

INTRODUCTION

The Maldives archipelago that lies in the Indian Ocean is approximately 600 kilometres Southwest of Sri Lanka. The 1190 islands occupy a geographical area of some 90,000 square kilometres and a total land of some 300 square kilometres. The islands are flat, low-lying and very small. Of the 1190 islands, only 202 islands are permanently inhabited.

Whilst 100 percent of the residents of Male' and the adjacent island Villingili that is considered urban (30% of the country's population) has access to clean safe water and proper sewerage services, a large majority of the rural population do not enjoy the same facilities. Rural residents still continue to drink untreated rainwater and occasionally untreated well water, which is highly vulnerable to faecal contamination caused by disposal of sewage effluent to the ground.

Although there are some private septic tanks and private and community owned and operated small-bore sewerage systems, some still continue to use the beach or the private *giffilis*¹. Such unsanitary practices perhaps explain the continuing high prevalence of water-borne diseases in the country. Among those most affected, children are the most vulnerable to these diseases. Although mortality due to diarrhoea and intestinal parasites has been fully controlled by medical treatment, lack of clean water and adequate sanitation continue to affect the health and quality of life of many rural children.

The Government of Maldives (GoM) is fully committed to the goal of safe and adequate drinking water and sanitation facilities for all Maldivians. Provision of these facilities is considered an integral part of the country's Primary Health Care Approach to health for all by the year 2000. Health education with emphasis on water supply and sanitation is considered as important as the facilities in breaking the link between water supply and diarrhoeal diseases.

In response to the International Water Supply and Sanitation Decade (1981–1990), the Government of Maldives developed a National Water Supply and Sanitation Master Plan to provide these services for the urban and rural population. A mid-term review was conducted in 1985 to assess the achievements of the national program. An end of Decade evaluation was conducted in 1990.

Drawing from the Decade and post Decade experience, effort is being made to create awareness on an issue of national concern and priority. In this regard, a draft policy paper is being prepared by MWSA, which will provide a basis for, where necessary, relevant policy changes. Such a policy change is fundamental, if provision of these very basic services is to achieve a higher degree of success, particularly for the rural population, which comprises more than 70 percent of the country's population.

¹ A compound within individual premises reserved for the burial of faeces and a shallow dug well for cleaning.

1. Present Situation In Urban And Rural Sanitation

1.1. Urban Sewerage

A comprehensive, island-wide sewerage network was laid in Male' in 1988. Every household in Male' is now connected to this system, achieving the national target of 100 percent coverage for Male'.

With the completion of the Male's sewerage network in 1988, no major outbreak of water-borne diseases has occurred within the country. To improve and ensure continuity of service, and as part of the Government's policy to privatise these services, the sewerage system has been handed over to a private company.

1.2. Rural Sewerage

Access to safe sanitation during the current plan period has reached 40 percent from a baseline level of 22 percent in 1990. Progress in this sector is slow due to geographical, financial and other logistical constraints. With increased awareness, better medical services and increased sewerage facilities, water-borne diseases in the rural islands have also been brought under control.

2. National Consultation Process

The stakeholders involved are:

- ≡≡ The Government
 - a. Ministry of Health, MoH
 - b. Maldives Water and Sanitation Authority, MWSA (Regulator)
 - c. Ministry of Atolls Administration, MAA
 - i. Island Development Committees
 - ii. Women Development Committees
 - d. Ministry of Planning and Development, MPD
 - e. Ministry of Home Affairs, Housing and Environment, MHHE
 - i. Male' Municipality
 - ii. Ward Offices
 - iii. Municipal Council
- ≡≡ Community and Users
- ≡≡ Non Governmental Agencies
 - i. UNICEF
 - ii. WHO
 - iii. UNDP
- ≡≡ Private Sector and water utilities, MWSC

National Policies are made through a consultative process of various government ministries, NGO's and the private sector participation.

NGO's usually provide direction guidelines. They often provide external assistance through AID packages and often assist bilateral donor assistance.

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The Government Ministries, through its various stakeholder committees and councils draw on the needs at the grass root level.

The key ministries thus help Ministry of Health formulate Policies, Plans (5-year Health Master Plan) to achieve the objectives and targets that are formulated and recommended during the consultations process. MPD documents and compiles the 5-year Health Master Plan in the country's total Development Plan.

Private Sector is encouraged to expand services in the outer islands that have inadequate water and sanitation services and where a demand and willingness to pay exist.

This consultative process is not very efficient but it works.

3. Present Policy Of The Government On Sanitation

Experience from sanitation programs in the country and throughout the world shows that sanitation programs are most effective when planned using a participatory, bottom-up process. The Government of Maldives (GoM) therefore gives a higher priority to promote appropriate planning in partnership with all stakeholders. In this regard, the sanitation sector planning, at all levels, are fully in line with and supportive of the overall guiding national development policy.

In this respect, sector planning will contribute to the achievement of principal goals of the current National Health Master Plan (1996-2005) and the Health and Environment Initiative of WHO, and the Agenda 21.

Future planning will not only ensure coverage, but will also ensure use, long-term sustainability and positive impact, both from a health and from an economic and environmental point of view. Long-term sustainability implies that in all future programs the service level will be decided by the community's willingness to share costs (capital and recurrent). Service levels will be expanded as the economy and affordability of the community increases.

Where new roles are to be taken-up by the community, planning will also ensure that the supporting agency will have an obligation to provide appropriate community training and backup support.

To ensure greater success of sanitation projects and programs, Maldives Water and Sanitation Authority (MWSA) will ensure that initiative and priorities for action comes from the communities and not from the central authority. Priorities will be judged based on economic demand, or a balance between what people want, need and most importantly, are willing to pay for.

It must be noted here that, for most of our communities, who are used to day-to-day subsistence survival, the concept of medium to long-term planning will be a relatively new process. Hence, plans at the central level will be used as guiding and supporting

plans for more detailed planning at the community level. The community based planning will therefore require a significant shift in attitudes and approaches at the community, middle and at the central level. In addition, it will require a high degree of political support, commitment and will. It may therefore take considerable effort, time and appropriate help and support for this concept to succeed fully and to achieve the desired results.

Finally, a critical part of planning will be networking with External Support Agencies (ESA's), intra and inter sectoral agencies.

3.1 Creating The Right Policy Environment

A right policy environment is required for achieving a higher degree of success in terms of coverage and service delivery. Sector policy will therefore be based on clear objectives, verifiable indicators of achievement and clear resource inputs. Sector policy will also be based on the principal of equity, sound and reliable data and feedback.

Equity implies that the opportunities for those that can afford to take initiatives themselves will be maximized, either through the private, donor or public funding. The latter will be achieved through strengthening links with the information-related strategies, including improved monitoring, evaluation, case studies and action research initiatives. Priority will be given to those that show a willingness to share capital and recurrent expenses. Specific sector policy will encompass the following concepts;

- a) Sanitation plays a major role in the promotion of primary health care.
- b) Water supply and sanitation must contribute towards a sustainable environment.
- c) Sanitation is an important catalyst in the process of rural development

3.2 Specific Sector Policies

The specific sector policy is to provide universal and equitable access to sanitary means of excreta disposal, reduce disparity between Male' and other islands, control diarrhoeal diseases, protect the groundwater resources from contamination and increase community participation.

Choice of technology will be based on simplicity, reliability, cost effectiveness, affordability and social acceptability.

The sanitation sector policy will ensure increased service delivery and sustainability of services provided. This will be achieved through the following measures.

- ≍≍ Effective advocacy to mobilize and redirect sectoral resources
- ≍≍ Mobilizing local resources
- ≍≍ Use of socially acceptable, technically sound and financially viable technologies
- ≍≍ Integration of sanitation and hygiene education with water supply schemes

- ⌘ Increased community involvement and participation
- ⌘ Capacity building required for planning, designing, implementation, operation and maintenance

3.2.1 Policy Issues

i. Coverage & Level of services

The coverage and level of service will be based on willingness of the community to pay for the level of service they choose.

ii. Subsidy ceiling

The subsidy ceiling will be the most critical element of the financial policy. A subsidy ceiling will be determined for each technical option, and it will be set at a level that will provide the right incentives for communities to make financial choices that reflect demand.

The subsidy ceiling will be transparent and equitable, so as to safeguard the social dimension of potable water and sanitation and to provide adequate incentives to the users to choose levels of service they could afford. Since subsidy ceiling is the amount that the government will provide per household for a basic level of service, it will directly affect the financial choices that communities make with respect to the service level. If a community wants to improve services beyond this basic level, the community must bear the costs as stated in (iii) below.

iii. Cost sharing

The government will not act as the sole provider. Instead, any amount over and above the subsidy ceiling set by the government, based on the type, coverage and level of service the community demands, In addition, the community will be asked to bear all recurrent expenses.

iv. Equity

In line with the Government's policy of providing these services to all rural population, MWSA will place a high priority to expand these services to achieve the national targets for sanitation coverage. Selection process will give a higher priority to those islands where poverty and disease are relatively high, incomes are marginal and sanitation coverage is low. Priorities will also be given to those communities whose economic demand and commitment are high. Informed choices will be offered to determine service levels.

3.4 Present Contribution To Sanitation

Presently government's contribution to sanitation is limited to projects planned and implemented by the government. UNICEF is the major international organization that contributes to the sector. Private contribution is limited and confined to small community projects, while NGO contribution to the sector is not very significant.

4 Technologies Used In Urban/ Rural Context

Maldives have tried and tested a variety of sanitary facilities including a variety of dry toilets, community toilets, septic tanks, small-bore sewerage systems and modern sewerage systems. The dry toilets and the community toilets were not socially acceptable and had to be abandoned.

In Male' a modern sewerage system is in place and is being operated by a private company. In other island, individuals are building septic tanks while the government continues to construct small-bore sewer systems, which discharges the untreated effluents into the shallow lagoon, close to the beach. Once completed, the system is handed over to the community and is operated by the community. The government continues to provide technical and support services.

5 Success Stories/ Experiences

In April 1996, as part of the government's policy to privatise the water and sanitation services, established a joint venture company - the Male' Water & Sewerage Company (MWSC), to provide potable water and sewerage services on the island of Male'.

The Company was granted an exclusive monopoly concession for a period of 20 years. The Company operates under a temporary operating licence issued by the Ministry of Health and Welfare.

Rasmussen and Schiotz a/s (R&S) of Denmark managed the company during the first five-year period under a management contract entered into between MWSC and R&S. The management contract was required to ensure the following key objectives.

- ≡≡ The utility is managed efficiently and cost-effectively
- ≡≡ Facilitate effective transfer of technology and know-how
- ≡≡ Instil a disciplined, working culture among the locals

At the end of the initial period, a professional team of Maldivian managers that were trained under R&S have taken over the management. The operation continues to be efficient and well managed.

With the establishment of MWSC and the subsequent take-over of the water and sewerage operations in Male' on January 01, 1996 by MWSC, MWSA's initial role as the service provider ceased. With its new mandate, MWSA is instituted as the national regulatory agency for water and sanitation services. Implementation of water and sanitation programs and projects in rural islands is now a function of the Ministry of Health and Welfare.

Prior to the establishment of MWSC, Male' had an island-wide sewerage network and a partial freshwater distribution network. Both these systems were laid as part of a project that was implemented between 1985 and 1988. Though the freshwater component of the project was to provide safe water for drinking and cooking (10 litres per person per day), the demand on the system soon exceeded the capacity of the

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system to deliver the rapidly increasing demand for freshwater. The demand for freshwater increased with the depletion of the freshwater aquifer of Male'.

To cope with the increasing demand for freshwater, the production and storage capacity were increased, and by end of 1993 MWSA's production and storage capacity of freshwater reached 1440 cubic meter per day and 18,000 cubic meters, respectively. By end of 1995, 34 distribution points were constructed and water delivered free of cost.

From 1995 to 1996 a comprehensive freshwater distribution network was laid in Male' by MWSC, providing direct house connections to all residential houses, restaurants, hotels and institutions. The network is already serving more than 12,000 customers serving 100 percent of the population. A total of fifteen public taps, located throughout the island, provides access to free water to the under privileged and those that cannot afford to pay.

The success of this project is that it has provided freshwater and proper sanitation services to 100 percent of the urban population. The success of the project also lies in the fact that with the completion of Male' sewerage network in 1988 and the Male' freshwater distribution network in 1996, there has not been a single outbreak of any diarrhoeal disease in the country. Furthermore, the unsustainable water and sanitation in the urban sector is now able to cater for any demand without government subsidies and financial input. The GoM is now able to receive a dividend for its 70% shareholding in the company. Prior to 1996, GoM had to invest over MRf 20 million to continue the services. In 2001 the dividend to GoM is over MRf 20 million.

National health statistics show that the downward case fatality rate achieved from 1.13 per thousand (1990) to 0.87 per thousand (1992) had not been sustained. In fact, statistics show an increase in the number of case fatalities from 1992 to 1993 (1.40 per thousand).

However, health statistics also show that from 1990 to 1993 the percentage of diarrhoeal cases in children under 5 years of age has decreased (From 60 - 40 percent). Since then, the percentage is on the increase (50 percent in 1994). Similar statistics after the completion of Male' freshwater distribution network is not available for comparison.

These trends indicate the importance of continuing the provision of these services and the importance of continuing the health promotion and awareness campaign.

6 New Approaches/ Strategies

The new approaches and strategies have been based on experiences gained from the decade and post-decade experiences, which are summarised as follows:

- ≈≈ Duplication/ Overlap of activities
- ≈≈ Fragmented responsibilities
- ≈≈ Diminishing community enthusiasm after start of project implementation

- ⌘ Delay in decision making
- ⌘ Lack of NGO involvement
- ⌘ Inadequate and slow involvement of women
- ⌘ Lack of incentives for employment conditions
- ⌘ Insufficient health and hygiene education

The new approaches and strategies also recognize the fundamental importance of ownership for the success of a new generation of sanitation programs. In addition, the application of these approaches and strategies will help MWSA to support this principle in three important ways, viz.:

- i. Promoting and guiding bottom-up planning and community based implementation and management.
- ii. Assisting inter sectoral and donor coordination and collaboration.
- iii. Encouraging appropriate contributions from the community as owners and users and beneficiaries.

6.1 Adopt A Demand Driven Approach

Worldwide experience of successful WES and regulator programs have proven that the changed role of the government as ‘facilitator’ is more successful than when the government acts as the ‘provider’ of WES services.

Here and throughout this paper, “demand” is interpreted in an economic context. An economic demand for a service exists when the beneficiaries demonstrate a willingness to buy the service they want at the price, which is affordable to them.

The demand-responsiveness of a project will be measured by the actual resource commitments users make, and the level and extent with which users determine the design, service level and management arrangements.

6.2 Promote Health Education

Personal cleanliness and sanitation are needed to reap the benefits of improved water supply and sanitation facilities. In this regard, the role of NGOs, SOs and HTFs will be a strengthened and expanded as a means to help communities achieve a better health status by providing hygiene education. NGOs are better equipped to promote health education and are more effective to make communities understand the possible routes of disease transmission and how improved WES facilities and good health practices can prevent the spread of diseases.

6.3 Promoting self-help

This shall be achieved by implementing programs through partnerships with Island Development Committees (IDCs), Women’s Development Committees (WDCs) and Non-Governmental Organizations (NGOs). Apart from this, the communities will also be provided with adequate training to construct, operate

and manage their sewerage systems, and toilets for their own health and convenience and on a sustainable basis.

6.4 Providing financing options and community contracting to improve affordability

Providing financing options are essential to help communities to implement WES programs and to ensure that even the poorest family in a community is not deprived from the benefit of clean water and sanitary toilet. Affordability shall be improved through establishment of a revolving fund and by awarding contracts to Island Development Committees (IDC's). The overall objective of the island (rural) sanitation program is to improve the health and well being of the island (rural) population. This will be achieved by;

- ≡≡ Expanding environmental sanitation technology to rural islands
- ≡≡ Reducing disparities between water and sanitation service coverage
- ≡≡ Promoting equity in terms of service and resource allocation
- ≡≡ Relating sanitation programs with other health programs
- ≡≡ Building capacity at grassroots level
- ≡≡ Preserving the environment by promoting sanitation
- ≡≡ Strengthening inter and intra sectoral collaboration
- ≡≡ Forging alliances with private sector
- ≡≡ Developing research and development capability

7. Future Plans/ Programs To Increase Coverage

All future programs will be based on sound assessments of the situation and needs, including human, financial and material resources, technical potential and past experiences. In this respect, this document reflects a sincere effort to highlight the importance of moving away from a rigid, short-time-horizon, donor and supply driven pattern of service delivery towards a more flexible, long-time-horizon, community led and managed, demand driven pattern of service delivery. Such a planning and implementing strategy shall reflect community demand and informed choice.

Approaches

- ≡≡ Develop transparent policies, clear rationale, guidelines and criteria for providing sanitation services.
- ≡≡ Adhere to adopted policies and ensure compliance by all parties.
- ≡≡ Adopt a demand-based approach in selecting/identifying the 'priority' island, and in determining the level of service to be provided.
- ≡≡ Level of service and coverage to be decided based on community contribution.
- ≡≡ Promote sense of ownership through involvement of the community in the very early stages of project planning and at all subsequent levels.
- ≡≡ Provide incentives for greater community participation.
- ≡≡ Assign procurement and construction works to the community.
- ≡≡ Design and install a system appropriate to the demand of the community. Adopt a flexible approach. (Do not install small-bore sewer systems on larger islands).

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- ⌘ Remove septic tanks unless absolutely necessary. Prefer catch-pits wherever possible.
- ⌘ Reduce the number of sea out-falls.
- ⌘ Involve NGO's in raising community awareness, particularly that of women.

Targets

- ⌘ Provide sanitation coverage to 80 percent of rural population.
- ⌘ Provide small-bore sewer systems to 25 percent of inhabited islands.

Priority Focus

- ⌘ Formulation and enforcement of appropriate standards and guidelines for sanitation
- ⌘ Human resources development
- ⌘ Training of plumbers and promotion of good engineering practices
- ⌘ Development of low cost sanitation technologies for island communities
- ⌘ Provision of adequate sanitation facilities for island communities
- ⌘ Rehabilitation and upgrading of old/ existing schemes