



Ministry of Environment and Energy
Republic of Maldives

NATIONAL AWARENESS STRATEGY

FOR WATER AND SEWERAGE



fenfahi

Clean water & adequate sewerage
services for all

MARCH 2017



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ISBN 978-99915-59-39-1

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Please cite this document as;
MEE (2017) National Awareness Strategy for Water and
Sewerage, Ministry of Environment and Energy, Male', Maldives

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ACRONYMS AND ABBREVIATIONS

HDPE - High-Density Polyethylene

IWRM - Integrated Water Resources Management

MEE - Ministry of Environment and Energy

MWSA - Maldives Water and Sanitation Authority

NBS - National Bureau of Statistics

NGO - Non-Governmental Organization

NWSP - National Water and Sewerage Policy

TOT - Training of Trainers

ACKNOWLEDGEMENTS

Ministry of Environment and Energy wishes to acknowledge and express appreciation to the valuable and generous support provided by the Adaptation Fund Project (AF Project), United Nations Development Program (UNDP) to formulate the National Awareness Strategy for Water and Sewerage and to carry-out related activities. The primary Research Report and Social Marketing Strategy by the AF Project have been instrumental in providing background information to shape this document.

The campaign outlined in this awareness strategy has been developed in consultation with a variety of stakeholder organizations. The authors wish to extend appreciation to the individuals who contributed their knowledge and expertise to this document including staff from the Water and Sanitation Department of Ministry of Environment and Energy and various stakeholder agencies.



“The population of 407,660 inhabits 188 islands in its 20 administrative atolls”

The Republic of Maldives is a chain of 1,192 small low lying islands grouped into 26 geographical atolls. It is oriented from north to south over 820 kilometers and spread over roughly 90,000 square km in the Indian Ocean. The population of 407,660 (NBS, 2014) inhabits 188 islands in 20 administrative atolls. The average ground level of the islands is 1.5 meters above sea level, making it the planet's lowest country.

Maldives is one of the most geographically dispersed countries in the world posing innumerable difficulties in development activities. The population resides in 188 administrative islands while 109 islands are used as resorts and 128 as industrial islands (NBS, 2014). Thirty eight percent of the population lives in Male' City (Male', Villimale' and Hulhumale').

WATER

“By the end of 2016, 41% of the population had access to safe water supply”

There are no rivers or streams in any of the islands of Maldives. The main freshwater resources exist as groundwater in basal aquifers, generally unconfined in nature and extending below sea level in the form of a thin fresh water lens. The groundwater aquifers are vulnerable to saline intrusion owing to the freshwater-seawater interaction and need to be carefully managed to avoid over-exploitation (MWSA, 2002).

“At present, 21 islands have piped water supply systems”

Groundwater was predominantly used for all water needs including drinking and cooking until the beginning of the 20th century. In most islands, the freshwater lens is quite thin, and become saline rapidly when abstractions exceed the sustainable yield. The groundwater resources are highly vulnerable due to its shallow depths and susceptible to contamination from land-based human activities. Over the years, ground water resources in most islands have become contaminated and the quality has deteriorated due to varying factors (MEE, 2017).

BACKGROUND

Rainwater is the main source of drinking water for the vast majority of islands in the atolls. According to NBS (2014) 87% of the population in the atolls uses rainwater for drinking. The island residents rely on household and community rainwater harvesting systems to fulfill their potable water needs.

After the 2004 tsunami, most of households in the islands were supplied with a 2500L high-density polyethylene (HDPE) rainwater tanks. The Water and Sewerage Policy (2017) state that it is a key focus of the government to improve the capacity and capability in rainwater harvesting to achieve self-sufficiency and to gain water security in the islands. To this end, the government seeks to engage the local government authorities and communities in water resources management.

In the most densely populated islands, the pressure on groundwater sources has increased to a point where it is extremely polluted and saline, that it is unusable. The capital Male', in particular, has grown from a city of 15,000 in 1972 to one of over 153,904 in 2014 (NBS: 2014). In Male' City desalination has been adopted as the means to provide a safe water supply. The nation's first desalination plant was installed in Male' in 1985 with the capacity to provide 200cubic meters per day. In the recent years the population of Male' City has increased rapidly and at present approximately 38% of the population reside in Male' city. The demand for desalinated water has increased significantly over the years, and currently the daily consumption of Male' City, stands at 20,960 cubic meters per day. In Male' City, all households are provided with desalinated water with metered connections (MEE: 2017). At present 21 islands in the Maldives have piped water supply systems.

“The nation's first desalination plant was installed in Male' in 1985”

“87% of the population in the islands uses rainwater for drinking”

“Main types of drinking water used in the atolls are:

- 87% rainwater
- 7% desalinated water
- 5% bottled water”



“Sewerage schemes in the atolls began in 1992”

“By 2016, 48% of the population had access to sewer networks with household connections”

SEWERAGE

In the earlier days bush/ beach open defecation and burial of feces in shallow pits in a designated area in the backyard of households were practiced in the Maldives as a way of sewage disposal. In the early 1980's trials of human excreta disposal systems including ash latrines, sealed pit toilets and public toilet blocks were trial tested and used in some islands. These proved to be unsuccessful due to the contamination of groundwater and soil as a result of the disposal of untreated wastewater to the ground, posing a public health risk. In the 1970s and 1980s diarrhea and cholera epidemics started in Laamu Atoll and spread across the country (MEE, 2017).

The capital Male' City, is developed with conventional waterborne sewerage system that has been operational since 1988. Sewerage schemes in the atolls began in 1992, with simplified sewerage systems known as small bore sewerage systems. These systems rely on collecting the effluent flowing from onsite household sewage collection tanks and piping this effluent to be disposed of untreated by near-shore marine outfalls (MEE, 2017).

Significant improvements have been experienced in the water and sanitation sector as new, more environmentally friendly water supply and sewerage systems are being implemented in the islands with the increased public and multilateral assistance. By the end of 2016, 48% of the population had access to sewer networks and 41% of the population had access to safe water supply systems with metered house connections. (MEE: 2017).

INTRODUCTION

The National Awareness Strategy for water and sewerage aspires to promote awareness in all. This strategy presents a five-year national awareness campaign - FENFAHI campaign (2017 - 2021). The key objectives of the campaign is to enable the public to become more knowledgeable, responsible and involved in water resources, water supply and sewerage systems management. It outlines key themes that will be integrated into education programs that lead to action.

FENFAHI campaign intends to increase knowledge in the general public, and will specifically target youth, school children, educators, businesses, industry, community groups, and NGOs. The goal and objectives of the strategy have been developed to instigate behavior change at individual and community levels to promote best practicable actions to protect and manage water resources, water supply and sewerage systems.

Many of the activities proposed in the FENFAHI campaign will work in harmony with the National Water and Sewerage Policy (NWSP) by the Ministry of Environment and Energy. In particular, the strategy aims to kick start awareness activities related to the following goals of NWSP;

- Goal 4** - Encourage private sector to invest and engage in water and sewerage services development
- Goal 5** - Build institutional capacity in water resources, water supply and sewerage services
- Goal 7** - Strengthen advocacy and awareness programs in water resources, water supply and sewerage
- Goal 8** - Promote Research and development for sustainable use of water resources, water supply and sewerage system
- Goal 9** - Protect and conserve water resources

The FENFAHI campaign aims to develop the human resource capacity and provide support to carry-out research work in related areas. The FENFAHI campaign also aims to encourage participation of individuals, communities and private sector and to establish networks and empower them to use capacities and resources more effectively and collaboratively to solve problems related to water resources management at the island level, regional level and national level.

“The NWSP targets to bring private sector and the general public together to manage, conserve and protect the water resources for the present and future generations”

“Fenfahi awareness campaign aspires to promote awareness in all”

“FENFAHI campaign has been developed to instigate behavior change at individual and community levels to formulate and promote best practicable actions ”



An increase in awareness can be achieved through a range of communications and by supporting community actions and behavioral change programs. Ultimately these actions will drive the society towards a sustainable life style and sustainable work practices that promote water management. A communication plan including an action plan will be developed to complement and kick start the indicative activities included in the FENFAHI campaign.

Goal of the FENFAHI campaign

Inform, educate and strengthen the capacities of individual(s) and communities and establish networks to manage water and to gain water security

FENFAHI Campaign identity

The overall identity for the campaign depicts the national vision for the water and sewerage services, that is;



fenfahi

Clean water & adequate sewerage
services for all

TARGETS OF THE CAMPAIGN

Targets of the FENFAHI Campaign

The FENFAHI CAMPAIGN plan has 3 key targets to achieve the aim of the campaign.

TARGET 1
Awareness and Education
Prepare the ground



TARGET 2
Instigate Behavior Change
Planting the Seed



TARGET 3
Establish and Sustain Networks
Make sure it Grows





TARGET 1: Awareness and Education

The campaign is aimed at increasing awareness of the need to value water resources and to use the water supply and sewerage systems wisely. The limited water resources in Maldives are under tremendous pressure from a growing population, ongoing development activities, pollution, and the effects of climate change. The demand for water outstrips the amount of clean water available in many islands of the Maldives. Several projects are being implemented under different schemes in order to provide access to safe water and sewerage facilities. The water resources and water supply and sewerage systems can only be sustained by changing people's attitude and behavior to use them more wisely.



TARGET 2: Instigate Behavior Change

The campaign will aim to engage and lead key stakeholders to adopt appropriate behavior and/or select best practices related to conservation and protection of water resources and management of water supply and sewerage systems. The community networks of core sectorial groups and potential stakeholders will be provided with training and resources to empower them to initiate individual and community driven actions to manage and sustain water resources, water supply and sewerage systems at the island level.



TARGET 3: Sustained / Networked

Throughout the campaign efforts will be made to establish and sustain networks at the local and national levels to strengthen and support water resources, water supply and sewerage systems management.

A mechanism would also be established to collect, disseminate and use data and to inform policies determined for the sector. The regional level information and activities will be shared to enable regions to take advantage of national level initiatives in a more regionally specific and relevant manner. It will assist in addressing and reflecting communities' needs in laws and regulations defined for the sector.

TARGETS OF THE CAMPAIGN

Themes and Topics

The underlying theme of the FENFAHI campaign is to assist individuals and communities to take ownership of the water resources, water supply and sewerage systems and to generate a sense of responsibility for their island water supply and sewerage systems. Specific themes and topics that will be addressed and promoted in the campaign are listed below;

1. Value of water and water security

Enable individuals to understand the value and importance of water security for human well-being, social & economic benefits and sustenance of eco-systems.

2. Water supply as a natural cycle

Enable individuals to understand that water availability is regulated by a natural cycle. To be able to understand water supply, it is hence important to understand rainfall patterns, variability and its effects on the sustainability of water resources. The campaign will promote actions that help bring a balance to the cycle.

3. Sources of water, threats and water safety

Enable the communities to acquire knowledge regarding different sources of water, and the variations in quality and safety of the different sources. Awareness will be increased on the threats and challenges to water safety.

4. Effects of climate change on water supply

Increase understanding of climate change and make linkages between effects of climate change and water management.

5. Sustaining water supply and sewerage systems

Provide information of what could be done by individuals to assist in managing and sustaining the water supply and sewerage systems. Identify and utilize practices to conserve water resources, manage and sustain water supply and sewerage systems.

6. Promote willingness to pay for water and sewerage services

Increase understanding of the true cost of water supply and sewerage services provision and increase the willingness to pay for water supply and sewerage services.



Objective 1

Improve awareness and engagement of government officials and donor agencies and enhance coordination of activities related to water resources, water supply and sewerage systems management.

Provisional activities

- ◆ Develop standard tools for communication.
- ◆ Develop tools to inform the public about events and milestones.
- ◆ Collaborate with different organizations to gather and provide access to information and data.
- ◆ Carryout baseline assessments and research studies.
- ◆ Liaise with ministries, institutions and donor agencies and establish linkages to synergize activities.
- ◆ Provide access to awareness materials.

Objective 2

Educate youth to drive Maldives towards a water secure future

Provisional activities

- ◆ Liaise with Ministry of Education and schools to increase and promote awareness and to instigate behavior change.
- ◆ Provide orientation to school management and teachers on the activities and programs to augment IWRM related co-curricular and extra curricular activities.
- ◆ Provide awareness materials such as factsheets posters, weather kits etc. to participating schools.
- ◆ Work with tertiary institutions and schools to showcase a National Science Fair on water and sanitation.
- ◆ Work with Universities and tertiary institutions to encourage, initiate and promote research work or project work related to integrated water resource management.
- ◆ Work with Universities and tertiary institutions to integrate water and sanitation related subjects into their programs.

CAMPAIGN OBJECTIVES

Objective 3

Improve communities commitment to water security and management

Provisional activities

- ◆ Conduct awareness and education programs to increase awareness and to instigate behavior change.
- ◆ Build partnerships with community groups to enable implementation of programs leading to "action".
- ◆ Conduct Training of the Trainers (TOT) programs to enhance skills of facilitators to carry out community education programs.
- ◆ Provide training programs and resources to facilitate water management planning.
- ◆ Provide test kits for water quality testing.

Objective 4

Encourage active involvement of businesses and industries in water management

Provisional activities

- ◆ Promote workplace water management through outreach programs. Launch a national competition awarding businesses for exemplary behavior and achievements in integrated water resource management.
- ◆ Encourage institutions to develop and implement water efficiency plans
- ◆ Conduct awareness and education initiatives targeting farmers on ground water pollution issues and influence positive behavior towards water security and management.
- ◆ Encourage businesses and industries to assist communities to adopt successful programs implemented by them.



Objective 5

Build adequate capabilities in Maldives to enable integrated water resources management (IWRM)

Provisional activities

- ◆ Provide information about regulatory compliance requirements and seek participation.
- ◆ Build and leverage partnerships with private sector to sponsor implementation of IWRM.
- ◆ Establish financing and grant schemes for IWRM.
- ◆ Provide formal training and skills development in IWRM.

STAKEHOLDERS

Stakeholders are individuals, groups and institutions with an established interest in the activities and results. Audiences are stakeholders that are directly targeted by the communications and outreach, with the goal of influencing or changing their knowledge, attitudes and practices. The audiences of the FENFAHI campaign include individuals, communities and target groups and institutions.

Stakeholders such as some government institutions, donor agencies and utilities, are vital to the success of the overall campaign and should be kept informed and engaged in the implementation and status of project activities. Nevertheless, they are not the primary audience for the campaign.

The communications team will send updates on the status of activities including successes, solicit feedback, and to leverage the resources made available by the group of stakeholders.

Target Audience

The FENFAHI campaign sets out a plan to enable the general public to become more knowledgeable, responsible and involved in water resource management. A particular focus would be on identifying institutions, groups and individuals who will participate and work as ambassadors in spreading awareness, demonstrate and promote the key messages portrayed by the program.

Target Audience includes:

Universities and Higher Education Institutions

The campaign team will work with Universities and Institutions with programs related to integrated water resource management to support and enhance related programs offered, or in planning stage. The students will also be provided with opportunities to engage in field trips, tours and research projects in related topics.

Businesses and Industries

The campaign team will encourage active involvement of businesses and industries in water management. The team will specially attempt to leverage partnerships with private sector to sponsor implementation of IWRM programs.

Youth (aged 18-35):

Youth in the community have the unique opportunity to generate change in the status quo for the better, improving resource management and addressing key issues that are affecting the islands. This group will significantly affect the future of the island as they get older and take on leadership roles, build households, and become active members of the community.

The campaign will focus on motivating the youth to learn about water resource management, and motivate them to participate and eventually take ownership of organizing and attending community awareness events and to initiate small actions intended to promote better management of the resources.

Students (aged 6 -17):

School children are an important audience to engage in taking action related to water resource management. By engaging students, the campaign team will have the ability to reach parents and the larger community as well.

Teachers and school management:

This group has significant influence and respect in the communities. The direct contact schools have with the parents and caretakers of their students, gives them a unique opportunity to spread awareness to not only students but to the greater community. Teachers can play an important role in leading and supporting campaign activities inside and outside the classroom. The campaign would equip teachers and the management with information to be able to answer questions, spread awareness, and build support. The school may also benefit from the products produced and distributed in the campaign and may find ways to utilize the material to enhance co-curricular and extra-curricular teaching. The campaign will aim to work with interested schools to develop an activities handbook for school children.

Atoll and island councils:

The atoll and island councils will be coached under this campaign on what their role and responsibilities are to sustainably manage the islands' water resources. They will need to understand what a water management plan is and what it will do for them. They will also need a few basic tools to help them create and implement a functioning water management committee and to develop and implement island water management plan and emergency plans. The Council members serve as community leaders and can be leveraged to build support for this campaign among the other audiences of the campaigns. This group is crucial to the success of this campaign.

STAKEHOLDERS

Hospitals/ Health centers:

The health care personnel interacts with nearly all island residents. They can be influential in specific areas such helping residents to understand pertinent information about water quality and health implications. This group will be equipped with information to be able to answer residents' questions and build support for taking actions and to provide support for the campaign material distribution. TV spots will also be shared with the hospitals and health centers to be played in the waiting rooms.

Utilities:

The utilities have substantially more knowledge and resources to collect data necessary for the water usage etc. They can significantly contribute in the development and implementation of water management and emergency plans. Utility staff will be particularly helpful in addressing questions around groundwater management, water demand and supply, water quality and tariffs. The campaign team will equip this group with the appropriate tools and information and seek partnerships to conduct some of the campaign activities.

Community groups:

There may be multiple community groups who have a vested interest in water resources management at the island level. For example, farmers, residents interested in developing guest houses, restaurants will need to be directly involved in water usage and conservation. Other groups interested in campaign activities may also raise concerns or add significant value to the plan. As such, the campaign team will try to identify and reach out to such groups as necessary.

Women:

The campaign will focus on motivating women to learn about water resource management, and motivate them to participate and eventually take ownership of organizing and attending community awareness events and to initiate small actions intended to promote better management of the resources. The inclusion of women's development committees (WDC) in the water management planning process will be necessary for its success. WDC will be recruited to participate in workshops, discussions and data collections to ensure that women's roles and needs are addressed in water management planning.



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ACTION PLAN AND COMMUNICATION PLAN

The FENFAHI Campaign is planned for 5 years. During the first year of the campaign core activities and programs will be launched to trial test the impacts and identify the challenges and achievements. The activities will then be modified as necessary and implemented at a larger scale from the 2nd year onwards.

Throughout the course of the activities factors that contribute to sustainability will be considered and promoted in an effort to assist with the continuation of the activities after the campaign period elapse officially.

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ISBN 978-99915-59-39-1