GLOBAL ENVIRONMENT FACILITY – GEF
SMALL GRANTS PROGRAMME – SGP

COUNTRY PROGRAMME STRATEGY FOR OP6 2015-2018

COUNTRY: REPUBLIC OF MALDIVES

JUNE 2016

TABLE OF CONTENTS

1. LIST OF ABBREVIATIONS

ABS - Access and Benefit-Sharing
ACR - Annual Country Report
ADB - Asian Development Bank
AMR - Annual Monitoring Report
AusAID – Australian Agency for International Development
AUSAID - Australia's Aid
BMUB - Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
CBA - Community-Based Adaptation
CBD - Convention on Biological Diversity
CBD - Convention on Biological Diversity
CBOs - Community Based Organization
CC – Climate Change
CCTF - Climate Change Trust Fund
CECM – Clean Energy for Climate Mitigation
EC - European Commission
EIB - European Investment Bank
EIB - European Investment Bank
EU- European Union
FADiP - Fisheries and Agriculture Diversification Programme
FSPs, - Full-Sized Projects
GHG – Green House Gases
GHG- Green House Gas
GIZ - German International Cooperation
GOM- Government of Maldives
HCFC – Hydrochlorofluorocarbon
IAP - Integrated Approach Pilots
IFAD - International Fund for Agricultural Development
IsDB – Islamic Development Bank
JAICA - Japan International Cooperation Agency
JAICA - Japan International Cooperation Agency
MEE - Ministry of Environment and Energy
MFA - Ministry of Fisheries and Agriculture
MFF - Mangroves For the Future
MSPs - Medium-sized projects
NAMA - Nationally Appropriate Mitigation Actions
NAP - National Action Programmes
NAPA - National Adaptation Plans of Action
NBSAP – National Biodiversity Strategic Action Plan
NCDs - Non-communicable diseases

NCSA - National Capacity Self-Assessment
NGOs - Non-governmental organization
NIP - National Implementation Plan
NPFE - National Portfolio Formulation Exercise
NSC - National Steering Committee (
POISED –Preparing outer Island Sustainable Electricity Development
POPs - Persistent Organic Pollutants
PRSP - Poverty Reduction Strategy Paper
PSP - Private sector participation
RETDAP - Renewable Energy Technology Development and Application Project
SAARC - Convention on Cooperation on Environment
SAPs - Strategic Action Programmes
SDG - Sustainable Development Goals
SDGs - Sustainable Development Goals
SEPLs - Socio-ecological resilience indicators for production landscapes
SGP – Small Grants Programme
Sida - Swedish International Development Cooperation Agency
SIDS - Small Island Developing States
SREP - Scaling up Renewable Energy Program
STAR - System for Transparent Allocation of Resources
UN Agencies – United Nations Agencies
UNCCD – UN Convention to Combat Desertification
UNDAF - United Nations Development Assistance Framework
UNFCCC - UN Framework Convention on Climate Change
USAID – US Aid
WB –World Bank
ZFEP - Zayed Future Energy Price

2. LIST OF FIGURES AND TABLES

List of Figures

List of Tables

SGP COUNTRY PROGRAMME STRATEGY FOR OP6

Country: **REPUBLIC OF MALDIVES**

OP6 resources

a. **Core funds: US$ 400, 000**

b. **OP5 remaining balance: US$ 5,144.30**

c. **STAR funds: US$ 178,345 (OP5 balance)**

d. **Global ICCA Support Initiative: US$ 300,000 – 400,000**

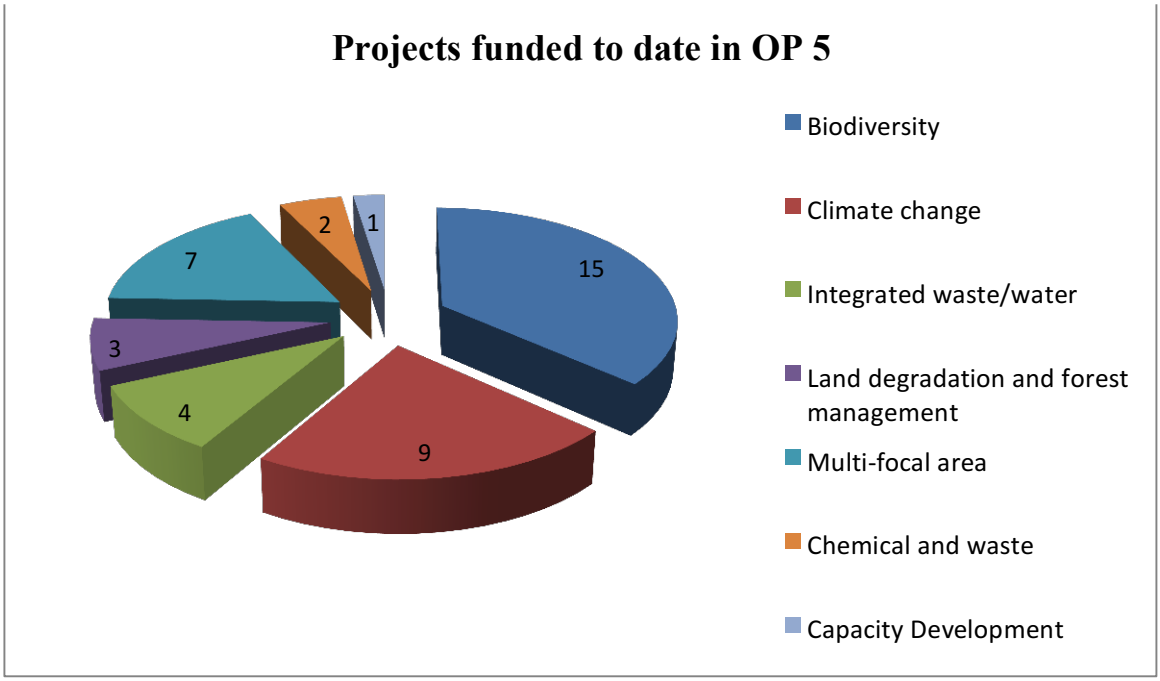
Background:

Maldives has been a member of GEF since 21st September 1994 (Ministry of Environment and Energy, 2014). GEF is the largest organization which gives free aid to address global environmental issues while supporting national sustainable development initiatives. Grant funds from The Global Environment Facility (GEF) Small Grants Programme (SGP) in the Maldives began in 2010, year 3 of GEF 4. The GEF SGP funds community based projects targeting the following objectives:

- Conservation of endangered species such as marine turtles and sea birds, and restoration and protection of sensitive habitats such as mangroves, beaches and coral reefs
- Establishment of proper waste management in an effort to prevent pollution and degradation of these sensitive habitats
- Switching from chemical intensive agriculture to organic and more sustainable methods
- Piloting of renewable energy options and,
- Promoting education, awareness raising and capacity building of civil society organizations and communities in the GEF focal areas.

GEF SGP commenced with a total of US$ 1, 100,000 as core funds in its 5th Operational Phase (OP 5). Complementing this, the government of Maldives contributed US$ 520,000 as STAR allocation during the second year of OP5. The core and STAR funds have been disbursed through six calls under OP5 to provide funding for a total of 41 grants (see Figure 1). These grants cover all the different focus areas of GEF with majority of the projects focused on Biodiversity Conservation and Climate Change.

Figure 1: Number of projects per focal area funded to date in OP 5



The projects were spaced over the whole geography of the Maldives, covering locations from North, South and Central regions. The projects range from documentation and preparation of educative tools on biodiversity, restoration and regeneration of wetlands such as positive impacts on the livelihood of people , increase livelihood from agriculture and farming activities, protection, conservation and creating awareness on biodiversity such as mangroves, reducing pollution through waste management, introduction of renewable energy and reducing emissions of GHGs, water quality and safety issues, sustainable management of resources, fish farming aquaculture and capacity and career building for youth. Please refer the map annexed (Annex 1) for further details on distribution of projects across the country.

1. SGP country programme - summary background

1.1 Important national results and accomplishments.

GEF SGP programme for the Maldives has been in operation for the past 6 years and has made significant contributions towards supporting the environmental efforts of different organizations; both governmental and non-Governmental organizations. The national results achieved for GEF SGP funded projects are at an island level. But, the outcomes of these small scale island

community based projects are a 'first step' towards greater impacts and achievements in the long run, which can contribute to national level results through replication, mainstreaming and change in policies.

Over the past years, GEF funding has allowed a broad reach in terms of diversity and types of projects funded. During operational phase 4 (2010 till 2012), a total grant of US$149,997 was delivered to the communities through 8 projects. The total co fund allocation from 2012 to end of OP5 was USD 1,100,000 funding a total of 41 projects (In 2012- 20 projects, 2013 – 6 projects, 2014 – 1 project & 2015 – 15 projects). In addition, SGP was successful in generating US$ 520,000 in co-funding as STAR allocation from the government of Maldives and grantee NGO partners raised a total co-financing of US$ 931,214. The country programme has achieved notable results at a national level both directly and indirectly through the achievements made by some of its grantee organizations. Some of these achievements include:

- The wide range of geography covered through the GEF SGP grant making, in such an isolated and fragmented geography, the Maldives.
- GEF SGP has been able to reach almost 40% of the total Maldivian population.

The following summarizes the key achievements of GEF SGP from January 2012 to October 2015 at community levels through changing behaviour and replication of successive projects.

Biodiversity Conservation:

Integrating fruit trees into farming systems and community based agro-forestry* by using organic farming practices *in Hulhumeedhoo:* by *Meedhoo Ehkuveringe Cheynu (MEC).

This project achieved its success from conducting training workshops to local communities including farmers and home gardeners of Seenu Atoll Meedhoo. The trainings resulted in creating awareness in promoting community based agroforestry and increased production of fruits without the use of chemicals. Furthermore, another outcome of the training was the successful replication of similar workshops; that were conducted to students of Seenu Atoll Education Centre (totaling 35% of the population) and Atoll Education Centre of Gnaviani Fuvahmulah.

Conservation of turtles and other marine species through community awareness and hands-on training: by Naifaru Juvenile.

Awareness was created for over 5000 participants (63 % of Atoll population) from Naifaru and neighboring islands including local high school. Hands-on training was provided on marine scientific practices (such as biometrics) which resulted in increased community involvement as conservationist and environmentalists. The Turtle Conservation Centre established with the help of GEF SGP at Naifaru provides exposure to the turtle world and educate people and visitors of all ages on turtles and its importance.

Established a plan to protect the marshland area as a 'protected area' in Gdh. Fiyoree (it is the only place in the Maldives where premium quality 'hau' can be grown)

A successful achievement of this project was the revival of mat (*Thundukunaa*) weaving among the Fiyoree farmers and instilling community awareness & involvement by providing demonstrations & trainings on the cultivation of 'hau' or reed to the wider community (a total of 167 community participants as beneficiaries).

Furthermore, the project was also successful in establishing a local market and distribution channels (focal points in Gahdhoo and Rathfandhoo) for the 'hau' in an organized manner. It also resulted in improvement of mat production, consistency of supply & price stability for mat weaving. This project is currently being up scaled by the Mangroves For the Future (MFF) project.

Climate change:

Provided educative knowledge to high school students on alternative energy forms such as solar, LED etc., to promote low carbon emission climate resilient development in Seenu Hithadhoo.

The local NGO VESHI in collaboration with Addu High School successfully installed solar panels that produce up to 2.8kW as part of its demonstration project. In addition to this, workshops carried out lead to successful means for provision of knowledge and practical skills required to engage local youth in the energy field. This project also played a key role in feed-in tariff regulation by successfully introducing a billing concept that allows residential and commercial customers who generate their own electricity to feed the surplus energy into the grid and receive credit.

Contributed to improved efficiency in use of energy for lighting municipal streets and public spaces in Gaafu Dhaalu Atoll.

One successful outcome of this project was the 50% reduction in carbon emissions and carbon footprint through the use of LED lights in municipal street and public space lighting in Hoadedhoo. As a result of the successful out of the initial project, this grantee received additional funding to upscale the project to the whole island, in 2015. Similar projects are being replicated in two other island of the Maldives.

Innovative use of alternative fuel sources instead of natural wood, in making traditional fish products and improving the livelihood of the community.

Under this innovative initiative, the team from Hirilandhoo introduced alternative mechanisms for obtaining sources of fuel for production of fish paste (*Rihaakuru)*. This resulted in reduction in the use of wood as a source of fuel and thus a decrease in number of trees that are cut down which ultimately resulted in reduction in emission of carbon foot print when making traditional fish paste. This project is a successful and innovative project that has the scope for replication in many other islands of the Maldives.

1.2 Achieving global environmental benefits from the accomplishments

The aggregated results in each focal area, international awards, up scaling achieved, replication and mainstreaming of demonstration projects and key lessons learnt by the SGP country programme:

SGP in Maldives has contributed to achieving environmental benefits across various focal areas. One such project was the solar energy project implemented by VEHSI at Addu High School. As a result of this project, Addu high School was awarded Abu Dhabi based Zayed Future Energy Prize (ZFEP); the opportunity to become the countries first fully solar-powered school.

Addu High School's proposal (an initiative of VESHI NGO), to install additional solar panels to increase its solar power production from 2.8kW to 45kW was selected as the best proposal in ZFEP Global High School category, from a pool of finalists that included top schools and colleges from Australia, New Zealand and India amongst others.

This is the most important recognition that has been received to a SGP grantee led project in the Maldives by an international organization. ZFEP is aimed at providing solutions to create a sustainable energy future. Addu High School aspires to be the champion of green schools in the Maldives by saving up to 59,000 tCO2eq worth of emissions with its solar power initiative, contributing to the achievement of Carbon Neutrality by 2020. Furthermore, considering the current trend of air conditioning used to cool classrooms in the tropical heat of the Maldives, the project has the potential to inspire other schools to follow suit and replicate the novel system through the country.

Furthermore, Huvadhoo Aid NGO received additional funding from AusAid Direct Aid Program to provide street lighting services to newly create residential area of the Hoadedhoo Island, enhancing and upscaling the project conducted under GEF SGP.

GEF SGP helps as a good piloting tool, to carry out projects which can address government level policies, which also helps identify better alternatives (LED being a better alternative than solar to be utilized in the streets) when such projects are to be implemented at a larger national level.

1.3 Overall situation analysis for the SGP country programme in OP6

GEF has been playing a significant role in the development initiatives of the country where its presence has helped realize successful outcomes in several projects; especially related to the environment. The following (Table 1) summarizes GEF SGP projects granted up to date:

Table 1: Number of projects and focal area for GEF SGP Maldives (OP5 from 2012-2015)

GEF focal area	Number of projects	%	Number of projects completed	Number of projects pending	Total US$
					GEF SGP committed
Biodiversity	15	36.6	6	9	446, 157.90
Climate Change	9	22	3	6	336,805.75
Integrated waste/water	4	9.8	-	4	198,720.00
Land degradation and forest management	3	7.3	1	2	95,600.00
Multi-focal area	7	17.1	-	7	225, 887.40
Chemical and Waste	2	4.9	-	2	33,340.00
Capacity development	1	2.4	-	1	50,000.00

Though GEF SGP has focused on all the different focal areas, the number of projects completed in most of the areas except for biodiversity (15) is comparatively less. Several reasons impede the successful project completion of which; the geographic spread of islands is one of the main deterrents. The Maldives has a wide geographic distribution across the Indian Ocean; comprising of 1,192 small islands that are scattered into a series of 26 natural atolls (Statistical Pocketbook of Maldives, 2015). Of these islands 193 are inhabited, 99 are tourist resorts and 77 are used for industrial, agricultural or other activity. The islands in general are very small with only 33 having a land area bigger than 1km2 and an average elevation of less than 1m above sea level. The total land area is estimated at approximately 235 km2 with a population of 338,434 (Statistical Pocketbook of Maldives, 2015). Thus, the segregated land space and spread of population puts a lot of constraint in keeping track of the project work and progress, even with monitoring trips conducted as scheduled.

Maldives is heavily dependent on its land, marine and coastal resources for sustenance as well as economic development with Fishing and Tourism as the major economic activities. Fisheries in Maldives are focused on tuna, reef fish such as snapper and grouper and aquarium fish. Many communities propose community level conservation projects for these fishes and also incorporating ways of increasing livelihood from different types of fish products. Agriculture is mainly a subsistence activity rather than economic, due to lack of land and poor soil conditions. Rural communities use home gardens or leased islands to grow leafy vegetables, chilies, fruits including watermelon, papaya and many root crops. Agriculture is an important sector for the rural community's livelihood and income. Hence, many such projects are proposed by these community groups to be conducted under the GEF SGP.

GEF SGP project implementation delays could also be accounted for by Climate Change (CC) risks to these community level projects. This was very much highlighted by the Indian Ocean tsunami which hit Maldives on 26 December 2004. It was a nationwide disaster, which caused severe damage to physical infrastructure of many islands and to the tourism and fisheries sector which is estimated at a cost of US$470 million. Maldives being a low lying state, CC and its implications are of major concern, which in the worst case scenario threatens the very existence of the country due to rising sea levels. Immediate impacts related to climate variability and extreme weather events include those affecting coral reefs, fisheries, tourism, coastal areas, freshwater, agriculture, infrastructure and livelihoods. Although these risks are addressed before project implementation, they still are pressing issues for effective implementation of GEF SGP projects. With much of these constraints highlighted here, GEF SGP has contributed much to the success of community based projects.

Another key to successful implementation of GEF relies on its funding. At the moment, the existing sources of co-financers to GEF SGP includes: CBA-SIDS, AUSAID and GEF STAR allocations. In addition to the existing donors, there is potential to obtain funding for GEF SGP from other bilateral and multilateral donors (such as Asian Bank of Development, World Bank, European Commission, Japan International Cooperation Agency (JAICA), Sida and Commonwealth foundations) as Maldives has been continuously receiving funding aid from these bilateral and multilateral donors.

Moreover, to increase the successful implementation of projects under GEF SGP OP6, there is a need to improve the capacity of the NGOs and CBOs at the initial stages of grant awarding. It is required that the start-up phase of GEF SGP in the Maldives, should place a high priority to provide training and capacity development of NGOs, CBOs and other relevant community groups. The trainings should not be limited to imparting knowledge and information in the focal areas, but also on proposal writing, project management, financial management and budgeting, monitoring, evaluation and reporting. To provide better grants and help better achievements among the projects, the complex templates relating to proposal submission and progressive reporting for monitoring and evaluation needs simplification to reduce hesitancy among CBO/NGOs to apply and win grants from GEF SGP. Also if alternative methodologies, such as video proposal & oral presentations could be accepted, then the number of CBO/NGO grantees could be increased for GEF SGP.

1.4 Experience and resources of past projects

Major partnerships and the sources of co-financing as in 1.2 above, supportive networks, model projects that can be visited of past projects can serve as a foundation for the effective implementation of SGP initiatives in OP6:

Together with the support from government and other private organizations, the experiences and resources established from OP5 is hoped to facilitate more effective implementation of SGP initiatives in OP6. Existing key co-financers of SGP includes AUSAID, STAR & SIDS CBA. It has created opportunities for more innovative cofinancing and funding arrangements established with international and other private sector organizations. An example of one such opportunity was the initiative from Addu High School (GEF funded initiative which received co-funding

from Abu Dhabi-based ZFEP) in support of their efforts to create a sustainable energy by converting 100% of the school's energy demand to renewable energy. This initiative can be used as an example to broaden the scope for engagement with external funding bodies by other similar institutions.

Additionally, the government in partnership with development partners (World Bank, AusAID, UN Agencies, BMUB, GIZ, CCTF, Asian Bank of Development, European Commission, Japan International Cooperation Agency (JAICA), Sida, Commonwealth foundations etc.) is responsible for large scale projects that are carried for the development of the country which can provide ample opportunities for co-financing SGP initiatives. Some of these developmental projects such as Mangrove management, coral reef monitoring, establishing of waste management centers, providing alternative energy efficiencies and establishing water resources management can contribute to the goals of OP6 as these can be aligned together. The Ministry of Environment and Energy (MEE) and Ministry of Fisheries and Agriculture (MFA) runs several such programs that is focused on the protection of the environment through the reduction of coastal threats, enhance mangrove and wetlands. Shown below (Table 2) are a number of large scale projects run by the government and annexed (Annex 2) is a map showing the wide geographic distribution of these major projects across the country.

Table 2: List of large scale projects undertaken by government

Focus areas	Funding body	Location	Allocated funds
POISED program a part of International Climate Initiative - aims to cut diesel-based energy in 160 islands by using photovoltaic.	• BMUB • GIZ • Asian Development Bank • Climate Fund Trust • Asian Development Bank special funds recources • SREP • IsDB • EIB • Maldives Governments	• Addu (Hithadhoo) • B.Goidhoo • GA.Villingili • Th.Buruni • Lh.Kurendhoo	USD 114,000,000
Integrated Water resource management to induce freshwater security	Multilateral adaptation fund from UNFCCC & also World Bank.	• Adh. Mahibadhoo • Gdh. Gadhoo • Ha. Ihavandhoo	USD 8,285,000
Sustainable system of solid waste management that reduces the associated environmental and public health risks and that can be replicated and scaled up across the country (MEMP)	World Bank	• Raa Atoll • Baa Atoll • Lh.Atoll • Noonu Atoll	USD 13,800,000

Renewable energy, coral reef monitoring and mangrove conservation. The Climate Change Adaptation Project (CCAP	• Climate Change Trust Fund (CCTF), supported by the Government of Maldives (GOM) • World Bank • European Union (EU) • Australian Agency for International Development (AusAid)	Addu (Protected Area of Hithadhoo)	USD 4,200,000
Reduce the impact of climate change and promote clean energy and conserve environment and natural resources	Italy	F.Magoodhoo, Maldives Metrological Services	EURO 4,000,000
Waste management system establishment in Gaafu Dhaalu atoll Faresmaathoda Island	Japan	GDh. Faresmaathoda Island	MVR 2,000,000
Fisheries and Agriculture Diversification Programme (FADiP)	IFAD co-financers Government	All Atolls	USD 5,374,000

Equally, streamlining of the grant making process by restructuring the SGP with specific periods for 'Calls For Proposals' has resulted in improved efficiency of the efforts of the National Steering Committee (NSC) in attaining effective implementation of SGP initiatives which can be replicated in OP6 as well.

Moreover, co-financing and in-kind as well as technical support for the projects will be essential for successful completion and long term sustainability of projects. Therefore, it is vital that GEF SGP establish partnership with Local Government, Embassies, and other private sector and international donors.

In addition to the above, establishing a technical sub-committee of the NSC that can work closely with grantees during the application process will aid CSO & NGOs in getting technical assistance at all stages of the project. Such a team will also be useful in closer monitoring and evaluation of projects granted on a regularly basis. This technical sub-team could comprise members from the local community, which will reduce costs and travelling expenses; for these extra monitoring & evaluation required, and also would provide better project outcomes.

2. SGP COUNTRY PROGRAMME NICHE

2.1 Alignment with national priorities.

Table 3: List of the relevant conventions and national/regional plans or programmes

Rio Conventions + national planning frameworks	Date of ratification / completion
UN Convention on Biological Diversity (CBD)	09-11-1992
National Biodiversity Strategy and Action Plan (NBSAP)	2016-2025
Nagoya Protocol on Access and Benefit-Sharing (ABS)	N/A
UN Framework Convention on Climate Change (UNFCCC)	09-11-1992
UNFCCC National Communications (1st, 2nd, 3rd)	05-11-2001 (1st), 2011(2nd)
UNFCCC Nationally Appropriate Mitigation Actions (NAMA)	N/A
UNFCCC National Adaptation Plans of Action (NAPA)	2007
UN Convention to Combat Desertification (UNCCD)	03-09-2002
UNCCD National Action Programmes (NAP)	03-09-2002
Stockholm Convention on Persistent Organic Pollutants (POPs)	17-10-2006
Cartagena Protocol on Biosafety and CITES	2003
SC National Implementation Plan (NIP)	N/A
Poverty Reduction Strategy Paper (PRSP)	N/A
Maldives Energy Strategy	2010
National Waste Management Strategy	2008
Fourth Tourism Master Plan	2012
GEF National Capacity Self-Assessment (NCSA)	January 2009
GEF-6 National Portfolio Formulation Exercise (NPFE)	Not conducted
Strategic Action Programmes (SAPs) for shared international waterbodies	1995
Minamata Convention on Mercury	N/A
Sustainable Development Goals	2012
Others (list) as relevant	
World Bank Poverty Reduction Strategy Paper (PRSP)	December 2007
Environmental Protection and Preservation Act (Law no. 4/93)	2014
Liability Regulation of 2011,	2011
Regulation on Environmental Impact Assessment	2012
Regulation on Land Reclamation and Dredging	2006
Migratory bird‟s regulation	2014

Regulation to control import of bird species as pets.	2015
Waste management regulation	2014
Uprooting of Trees Regulation	2007
Tourism Act	1999
The Law on the Maldives Fisheries, Plant Protection Act	2010
Coral and Sand Mining Regulation	1993
Pledge to make Maldives carbon neutral by 2020	March 2009
Pledge to make the entire country a Biosphere Reserve by 2017	2013
SAARC Convention on Cooperation on Environment	April 2012

2.2 Opportunities to promote the meaningful involvement of communities and CSOs

Given the country priorities as represented in Table 3 previously (see page 17), the opportunities to promote the meaningful involvement of communities and Civil Society Organizations in their further development or updates as well as national implementation & priorities that need immediate preparation and capacity building for so that opportunities for community and CSO involvement in them are fully exploited are discussed next.

Given the geographic nature of the country, Maldives faces a number of environmental issues at all levels. Some of the key issues as highlighted in key strategies (the Maldives Energy Strategy, National Biodiversity Strategy and Action Plan, National Waste Management Strategy, 4th Tourism Master Plan and from Climate Change Strategy) includes:

- Constraint in technical, technological and human capacity of agencies and in local communities including CBOs and NGOs, government and private sector which is essential for enforcement of policies.
- Access to justice remains limited, with more than two-thirds of the population preferring to settle disputes outside of court.
- Financial and resource constraints and lack of expertise and familiarity with the new concepts of democracy have been found to reduce functional governance at all levels.
- The governance and proper institutional arrangements for biodiversity conservation are limited with lack of understanding of the roles and responsibilities coupled with the weak inter-institutional cooperation necessary to implement the mandates entrusted in them.
- Threats caused to biodiversity due to human intervention and natural causes including habitat loss, over-exploitation, beach erosion, infrastructure development, overpopulation, invasive alien species and climate change among many others.
- Limited published research in all the areas.
- Lack of systems and procedures for the disposal of special wastes

- Lack of a centrally managed database to gather information about the quantities and types of waste
- Financial incapacity to manage waste especially at island level
- Limited private sector participation in waste management
- Low public awareness on good waste management practices
- Inadequate infrastructure and capacity to provide 24-hour electricity due to mechanical failures or the price and availability of fuel supplies
- Low public awareness regarding energy conservation and consumption
- Low accessibility and cost disparity across the country for fuel, electricity, food and other consumer goods.
- Lack of capacity in development, design, implementation and management of renewable energy
- The agriculture sector is constrained by the limited availability of cultivable land, poor quality of soil and the abundance of cheap imports of vegetable and fruits.
- Heavy import dependency, limited food storage and ad hoc distribution also pose severe food security risk to the population. The Maldives imports almost all the food items except fresh tuna and coconut.
- Long-term and emergency food storage is virtually absent except for warehousing in Male' and other islands.
- Unsustainable agricultural practices with increase in chemical based fertilizers and pesticides.
- Increase in import of alien species as exotic pets, ornamental plants and agricultural crops. Some alien species becomes dominant and invasive, challenging survival of native species.
- Increased demand of bottled water as drinking water, mainly associated with ground contamination and reduced precipitation.
- Only 7 out of 196 inhabited islands including Capital Male' have access to piped desalinated water.
- Maldives has no surface storage and relies on groundwater resources for daily use in islands which is prone to contamination.
- Rise in temperature leads to coral bleaching, loss of beach, saltwater intrusion and loss of tropical vegetation.
- Transformation of the biophysical conditions of the pelagic environment, resulting in decreased tuna catch in the islands.
- Changes in temperature and rainfall regimes are causing higher incidence of vectorborne diseases such as frequent outbreaks of dengue.
- Climate change-related health risks such as level of malnutrition in children, due to issues of accessibility and quality of healthcare, high population congestion and low income level.
- Flooding of islands during heavy rain fall
- Severe soil erosion and sedimentation of corals

- Destruction of habitats, including reefs, lagoons, beaches and mangroves due to land reclamation, harbour building, channel construction, seawall construction and many related infrastructure development activities
- Maldives consists of small and low lying islands where most of the housing structure, resort infrastructure, tourist accommodation, industrial infrastructure, powerhouses, and waste facilities and communications infrastructures are located within 100m of the coastline.
- Social issues arising from a large group of youth population not being in a school or employed. Such high unemployment rates within the limited island economies, physical isolation, increasingly conservative social values, increase in substance abuse; increased gang violence.
- Sexual and gender based violence as well as high level of violence against children and young people.
- High gender stereotypes and attitudes exists where women face major constraints in the political representation and access to decision making structure, access to jobs and credit property.
- Governance challenges with regard to issues of strengthening participation, transparency, accountability and rights based approaches to development as well as mainstreaming environmental sustainability.
- Growing proportion of an aging population and the high prevalence of non-communicable diseases (NCDs) place a huge financial burden on the national health system.

At present, MEE is the key authority involved in addressing above stated environmental issues through the implementation of national level strategies and policies and in collaborating with the Atoll or island councils, in a top-down process, by providing funding and assistance. Other stakeholders including the UN agencies, Environmental Protection Agency, the Ministry of Tourism, Ministry of Fisheries and Agriculture, etc. also play key roles in helping the government realize the national level strategies and policies.

In addition to this, other non-governmental and Civil Society Organizations (CSOs) play a vital role in implementing the MEE polices. CSOs have been directly involved in the implementation of environmental projects through GEF SGP and have participated in several projects, in areas such as preparation of educative tools on biodiversity, restoration and regeneration of wetlands, agriculture and farming activities, protection, conservation and creating awareness on biodiversity, reducing pollution through waste management, introduction of renewable energy and reducing emissions of GHGs, water quality and safety issues, sustainable management of resources, fish farming and aquaculture and capacity and career building for youth). CSOs‟ involvement in these kinds of projects has increased significantly in the recent years as evident from CSO involvement in GEF OP5 projects.

Likewise, under GEF OP6, some of the critical issues highlighted above can be addressed through involvement of CSOs. These include issues related to:

- skill development of youth and children,
- gender based inequality such as access to jobs,

- social benefits,
- education and health care,
- governance issues such as limited frameworks in place to develop and promote inclusive and sustainable growth,
- economic diversification,
- social protection,
- environmental and climate change issues such as water pollution,
- waste management,
- poor agricultural practices,
- decline in certain species such as turtles,
- increase in chemical based fertilizers and pesticides,
- biodiversity issues such as lack of awareness, at local, national, individual and institutional level on the values of biodiversity

The above issues need to be classified as high priority and funding needs to be provided in order to enable communities to address these issues.

2.3 Potential for complementary and synergy of selected OP6 strategic initiatives

As part of the OP6 strategic directions at the national level, describe below, the potential for complementary and synergy of selected OP6 strategic initiatives with:

Government funded projects and programmes (summary in column 3 of Table 4 below):

Through the sectorial policies/strategies of government (see below for policy details), there is substantial scope to create synergies for GEF projects; especially in the focal areas of solid waste management, water resources management to increase water security, establishing proper sanitation mechanisms, climate change resilience and adaptation programs and improved public health as these are major initiatives where government funded projects are focused on.

Some of the ongoing government funded projects that focus on the above mentioned focal areas include: Maldives Climate Change Trust Fund (CCTF), Adaptation Fund Project, USAID Water Supply Project at Hinnavaru, Green Climate Change Fund Project. Under OP5, most of the projects under SGP were linked to one of the priority areas of the government and thus received support. Thus, this synergy is essential in OP6 as well in order to communicate effectively between community members and key stakeholders to avoid project redundancy, duplication of resources and address difficulties faced with technical and financial limitations which would result in better accomplishments at both community and national levels.

Government sectorial policies/strategies

Maldives National Energy Policy and Strategy 2010

(Ministry of Environment and Energy)

Policy 1 – Provide all citizens with access to and affordable and reliable supply of energy

Policy 3 – Promote energy conservation and energy efficiency

Policy 5 – Promote renewable energy technologies

Policy 6 - Strengthen the management capacity of the Energy Sector

Maldives Climate Change Policy Framework – 2015

(Ministry of Environment and Energy)

Policy 1- Ensure and Integrate sustainable financing into climate change adaptation opportunities and low emission development measures;

Policy 2 - Strengthen a low emission development future and ensure energy security for the Maldives;

Policy 3 - Strengthen adaptation actions and opportunities and build climate resilient Infrastructure and communities to address current and future vulnerabilities;

National Biodiversity Strategy and Action Plan- 2016-2025

(Ministry of Environment and Energy)

Strategy 1 – Strengthen governance, policies and strategies for biodiversity

Strategy 2 – Enhancing communication and outreach through awareness programmes and capacity building

Strategy 3 – Work together globally for biodiversity conservation

Strategy 4 – Ensure sustainable use of biological resources

Strategy 5 – Address threats to conserve biodiversity

Strategy 6 – Strengthen Information Management and Resource Mobilization

National Waste Management Strategy – 2008

(Ministry of Environment and Energy)

Policy 1 –	*Establish a governance structure for solid waste management which will distribute clearly delineated roles and responsibilities for solid waste management at island, region and national levels will be established*
Policy 2 –	*All waste producers have a duty to manage the wastes they generate*
Policy 4 –	*The waste management system will accommodate the specific requirements of special wastes*
Policy 8 –	*Private sector participation (PSP) will be facilitated where it is financially viable for both the government and the private sector*
Policy 11 –	*The community participation in and awareness about good waste management practices will be maximized*

Fourth Tourism Master plan - 2013-2017

(Ministry of Tourism Arts & Culture)

Strategy 2.1. -	*Improving waste management practices of local communities*
Strategy 2.2. -	*Developing and enforcing management plans for sensitive Environments*
Strategy 2.3. -	*Establishing marine managed areas in resort house reefs*
Strategy 2.5. -	*Implementing climate change adaptation programme for tourism industry*
Strategy 2.6. -	*Implementing a low carbon programme for tourism Industry*
Strategy 3.5.	*Positive Action for Women's Participation in Tourism*

UNDP CO/UN System projects and programmes to implement the CPD, UNDAF Strategic Plan etc. (summary column 4 of Table 4 below):

Sustainable Development Goals (SDGs)

The 2030 Agenda comprises 17 new global goals, which will guide policy and funding for the next 15 years, out of which the following are aligned with the proposed strategic initiatives of the GEF SGP OP6:

Goal 3:	*Good Health and well-being*
Goal 5:	*Gender Equality*
Goal 6:	*Clean water and Sanitation*

Goal 7:	*Affordable and clean energy*
Goal 11:	*Sustainable cities and communities*
Goal 12:	*Responsible consumption and production*
Goal 13:	*Climate Action*
Goal 14:	*Life below water*
Goal 15:	*Life on Land*
Goal 17:	*Partnerships for the goals*

UNDAF, United Nations Development Assistance Framework, Maldives - 2016-2020

Under the UNDAF, the following priorities are identified (which the UN will contribute its resources collectively based on its comparative advantage and in collaboration with strategic partners):

Outcome 1:	*Youth and Children access equitable, inclusive and quality social services and have increased opportunities for skills development*
Outcome 2:	*Gender equality is advanced and women are empowered to enjoy equal rights and opportunities in access to social, economic and political opportunities*
Outcome 3:	*Citizen expectations for voice, sustainable development, the rule of law and accountability are met by stronger systems of democratic governance*
Outcome 4:	*Growth and development are inclusive, sustainable, increase resilience to climate change and disasters, and contribute to enhanced food, energy and water security and natural resource management*

GEF funded projects in the countries, i.e. National Portfolio Formulation Exercises (NPFEs), ongoing and planned FSPs, MSPs, and Integrated Approach Pilots (IAPs) as relevant (summary column 3 of Table 4 below):

There have been a total of 41 projects approved and implemented in Maldives under the GEF 5. The areas of focus for these projects includes: 15 projects in Biodiversity, 9 projects in Climate change, 4 projects under International Waters, 3 projects in Land Degradation and forest management , 2 projects in Chemical and Waste, 1 project in Capacity Development and 7 projects in Multi-focal area.

In addition to this, ongoing and planned FSPs, MSPs includes: Participation in the Clearing House Mechanism of CBD; National Biodiversity Conservation Strategy, and Action Plan and Country Report to the CBD; National GHG Inventory and Vulnerability Assessment for the Maldives : A Climate Change Enabling Activity; Renewable Energy Technology Development and Application Project (RETDAP); Atoll Ecosystem-based Conservation of Globally Significant Biological Diversity in the Maldives' Baa Atoll; National Capacity Self-Assessment (NCSA) for Global Environmental Management; National Adaptation Plan of Action; Integrating Climate Change Risks into Resilient Island Planning; Increasing Climate Change Resilience of Maldives through Adaptation in the Tourism Sector; Strengthening Low-Carbon Energy Island Strategies and Enabling Activities to Facilitate Early Action on the Implementation of the Stockholm Convention on POPs.

Other major Donor projects and programs (summary in column 3 of Table 4 below):

Other major Donor projects includes the Italian government aided project on reducing the impact of climate change and promote clean energy and conserve environment and natural resources; Japan funded project on Waste management system establishment in Gaafu Dhaalu atoll Faresmaathoda Island and FADiP, Fisheries and Agriculture Diversification Programme.

Table 4. SGP contribution to national priorities / GEF-6 corporate results

SGP OP6 strategic initiatives	GEF-6 corporate results by focal area	Briefly describe the SGP Country Programme niche4 relevant to national priorities/other agencies	Briefly describe the complementation between the SGP Country Programme with UNDAF & Other institution initiatives
Community landscape/seascape conservation	Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Role of the SGP in community landscape/ seascape will be to support the work of Civil Society groups/ NGOs in: • Restoration and rehabilitation of mangrove forests and coral reefs Managing coastal zones through development and implementation of integrated coastal management plans at islands. SGP could help in formulation of management plans through ICCA funding and provide support to youth groups and NGOs to take advantage of conservation initiatives through capacity building activities. • Reducing pollution from solid and chemical waste Promotion of integrated water resources management at island level. Enforcement of established management of protected areas. • Sustainable & alternative livelihoods from managed ecosystems such as mangroves and coral reefs, through the implementation of the ICCA Initiatives.	With regard to community landscape/seascape conservation, the SGP CP finds thematic alignment within the area of biodiversity and protected areas. ○ More specifically, the work of SGP aligns with UNDAF Outcome 4 It also aligns with: NBSAP strategies1, 2, 3, 4, 5 & 6 4th Tourism Master plan strategy 2.2,2.3 SGDs goal 14 and 15

SGP OP6 strategic initiatives	GEF-6 corporate results by focal area	Briefly describe the SGP Country Programme niche4 relevant to national priorities/other agencies	Briefly describe the complementation between the SGP Country Programme with UNDAF & Other institution initiatives
Innovative climatesmart agro-ecology; Community landscape/seascape conservation	Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	• Introduction of alternative technologies to make local agriculture more resilient to climate change. Introducing organic principles into farming practices to reduce chemical usage and pollution resulting from them and as a means of sustaining food security and agricultural livelihoods • Introduce community based mechanisms to increase the food security at islands in case of extreme events. • Promotion of community based vector surveillance at islands to address emergence and re-emergence of climate related vector borne diseases.	Under the Innovative climate smart Agro-ecology; the alignment is in the thematic area of climate change, chemicals and waste, land degradation. The work of SGP aligns with UNDAF Outcome 4 Aligning also with: Maldives National Energy Policy and Strategy 2010, policy 3, 5, 6, SDGs goals 3, 11, 12, 15
Community landscape/seascape conservation	Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and	Protection of island's coral reefs from point source pollution, promotion of appropriate sewerage treatment systems, management and safe disposal of solid waste	The work of SGP aligns with: NBSAP strategy 3, 5 and 6 SDGs goals 6,14, 15

SGP OP6 strategic initiatives	GEF-6 corporate results by focal area	Briefly describe the SGP Country Programme niche4 relevant to national priorities/other agencies	Briefly describe the complementation between the SGP Country Programme with UNDAF & Other institution initiatives
	maintenance of ecosystem services		
Energy access co benefits	Support to transformational shifts towards a low emission and resilient development path	• Promotion of renewable energy options at islands to achieve national level target of 30% of day time demand by renewable energy, • Promoting low emission, low carbon development • Increasing community awareness and capacity to use alternative sources of energy	The thematic areas that align with SGP CP are Climate change, Chemicals and waste & Capacity Development. More specifically, the work of SGP aligns with UNDAF Outcome 3, & Outcome 4, Aligning also with: Maldives National Energy Policy and Strategy 2010, policy 1, 3 Maldives Climate Change Policy Framework goal 1, 2, and 3. SDGs goal 7, 11, 12 4th Tourism Master Plan strategy 2.5, 2.6,
Local to Global Chemicals Coalitions	Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	To achieve HCFC phase out by 2020. Training and awareness on POPs and other harmful chemicals	Thematic areas that align SGP CP initiatives in the area of local to global chemicals coalitions are Climate Change and Chemicals and Waste. It also relates to UNDAF in the Outcome 4, all the outputs.

SGP OP6 strategic initiatives	GEF-6 corporate results by focal area	Briefly describe the SGP Country Programme niche4 relevant to national priorities/other agencies	Briefly describe the complementation between the SGP Country Programme with UNDAF & Other institution initiatives
			National Waste Management Strategy's policy 1, 2, 4, 8, 11 4th Tourism Master Plan strategy 2.1
CSO-Government dialogue platforms	Enhance capacity of Civil society to contribute to implementation of MEAs (multilateral environmental agreements) and national and sub-national policy, planning and legal framework	• Establishment of a GEF coalition with an academic & research Centre • Capacity building for CSO through training and other means facilitated by GEF & academic research Centre coalition. • Establishment of ICCA network which will enhance MEAs (multilateral environmental agreements) strengthening CSO-Government dialogue platforms	This is part of the capacity building process which involves decision making for issues such as multilateral environmental Agreements, national policy planning and legal framework. This approach will be gender sensitive and inclusive. Thematic areas that complement SGP CP are Capacity Development. It also relates to UNDAF in Outcome 1, Outcome 2, and Outcome 3 Maldives National Energy Policy and Strategy policy 6 Maldives Climate Change Policy Frame work goal 3 NBSAP strategy 6

SGP OP6 strategic initiatives	GEF-6 corporate results by focal area	Briefly describe the SGP Country Programme niche4 relevant to national priorities/other agencies	Briefly describe the complementation between the SGP Country Programme with UNDAF & Other institution initiatives
Social inclusion (gender, youth, indigenous peoples)	GEF Gender Mainstreaming Policy and Gender Equality Action Plan and GEF Principles for Engagement with Indigenous Peoples	Increase participation of disadvantaged groups such as youth, women and people with special needs.	The engagement and involvement of civil society and social inclusion (gender, youth and other vulnerable groups) are crosscutting themes and generally show complementation through the alignment in UNDAF Outcome 1, 2, 3 & 4 4th Tourism Master Plan strategy 3.5 SDGs goal 5
Contribution to global knowledge management platforms	Contribute to GEF KM efforts	Improving GEF SGP capacity for store, manage and disseminate information and knowledge. Using Knowledge fair as a mean to reach people and government stakeholders Using academic research Centers for information publication	The sharing of experiences and lessons learnt at "grassroots" will be supported by the civil society level in all areas of work for SGP CP. Alignment will be made between SGP CP and UNDAF in the Outcome 1, Outcome 3. Maldives National Energy Policy and Strategy policy 6 Maldives Climate Change Policy Frame work goal 3 NBSAP strategy 6 National Waste Management Strategy policy 8 and 11

OP6 STRATEGIES

Cross-cutting OP6 grant-making strategies

From national level consultations, assessments in Section 1 and scoping exercise results described in Table 4, critical cross-cutting OP6 projects that can be supported at national level outside of the selected landscape/seascape focus areas including important initiatives that will strategically position the country programme and prepare stakeholders to later implement OP6 initiatives pertaining to capacity development; knowledge management; policy and planning; CSO-government dialogue platforms; as well as fellowships for indigenous peoples are discussed next.

To further support and strengthen the effective implementation of OP6, there are a number of important initiatives in addition to the strategic initiatives discussed above. These initiatives are related to cross-cutting themes and include the following:

Civil Society Capacity Building

Another important initiative that needs priority in making GEF SGP OP6 successful is the Civil Society Capacity Building which continues to be critical among both potential and existing grantees. For potential grantees, there is a need to build capacity in both project identification and proposal writing to ensure that the projects applied for are in line with the programme's strategic initiatives and that applications submitted are properly completed.

Capacity building is also required for some existing grantees, especially in the area of awareness and knowledge relating to conventions and national planning frameworks as well as various thematic issues. This will assist in enabling CSOs to be more engaged in contributing to the development of national environmental policy and planning. E.g. capacity building in the development design, implementation and management of renewable energy and creating public awareness in good waste management practices, increasing knowledge, building capacity and resources to address issues related to alien species and illegal trade of biodiversity remains a challenge.

Establish partnerships.

During OP6 GEF SGP, it is deemed important that partnerships with government, private sector and other development partners be established through effective communication channels to achieve greater synergy among the important projects. Through this kind of partnership, it is important to exchange not only financial support, but also other required skills support such as technical and

know how support. Building partnerships with the private sector is one of the important strategies highlighted in the National Waste Management Strategy.

Knowledge Management

Another important area of focus for OP6 is to establish & sustain CSO government dialogue platforms. Knowledge Fair is seen as a cross-cutting project that can actively engage past and present grantees and provide an opportunity for highlighting their work and the SGP programmes on a national and regional level.

Policy and Planning

Policy and planning is one other important area where OP6 can put emphasis on. In order to make GEF SGP OP6 successful it is vital for GEF to participate in government policy and planning of national environment projects so that GEF projects can be synergized better with the national programs. Examples of such national programs include mainstreaming biodiversity into private sector and making it a priority at national level, decline in certain species such as turtles and tuna catch, clearance of vegetation to meet the demands of an increasing population and economic growth, agricultural practices with increase in chemical based fertilizers and pesticides, chemicals which can enter into the food chain and into the freshwater aquifers and ultimately which affect the natural vegetation as well as humans.

Landscape/seascape-based OP6 grant-making strategies

The process of Country Programme Strategy development was implemented in 3 (three) phases:

Step 1 OP6 Country Programme Strategy consultations and Scoping exercise
Step 2 Selected Landscape Baseline Assessment
Step 3 Country Programme Strategy Finalization

The process of strategy development was based on the information gathered from the success stories of past projects, lessons learnt and best-practices exercises, and participatory focus group discussions, direct meetings and interviews with the relevant stakeholders.

Initially, consultations and scoping exercise with various stakeholders (Ministries, NSC, donors, potential donors, and NGOs) was performed in order to identify potential landscapes. This gave insight and feedback on the environmental priorities as well as the areas in which the organizations were engaged with and deemed important. Also, an assessment of the existing situation was performed in order to identify the results and achievements of the SGP country programme thus far in order to identify the priorities for support in OP6. The conclusion was that since the Maldives is a small country, the entire country should be considered as one landscape for grant-making projects. Additionally, thematic areas to be prioritized within strategic initiatives were identified during the consultation process. The Country programme strategy development and finalization was done with regular communication and close work with the GEF SGP team and NSC.

Figure 2: Map of Maldives

Source: http://www.worldmap1.com/map/maldives/map_of_Maldives.gif

GEF SGP Maldives, based on the relevant conventions, national policies/frameworks and multi-stakeholder consultations, has strategically prioritized 6 (six) main thematic focuses, which are in line with GEF OP6 Strategic Initiatives. These include:

Component 1: Community landscape conservation.

Under this component, priority will be given to projects based on the focal area of biodiversity conservation including land use, rehabilitation, loss of species, coastal zone management, marine protected species, sustainable livelihood development. Here, importance will be given to landscape projects on areas that are either existing that hold a high conservation value or areas that will lead to declaration of new protected or natural monuments landscapes. Also, this thematic focus will aid in promoting conservation of endangered and threatened species within their habitats.

Figure 3: Naifaru juvenile Conservation Centre

Component 2: Climate smart innovative agro-ecology.

The types of projects that will be focused under this component include the implementation of sustainable farming practices and promotion of livelihoods in sustainable agriculture. One focal area will be agro-biodiversity conservation such as collection, protection and multiplication of primordial varieties/breeds and promoting conservation of traditional products and production practices.

Figure 4: Practical session on Smart climate and agro-ecology systems

Another area of focus will be projects on Smart climate and agro-ecology systems which will lead to the promotion of adaptation measures that will aid in increasing the resilience and adaptation of agriculture to climate change thereby promoting innovative agro-ecological measures for protection of ecosystem and environmental friendly agricultural production.

Component 3: Low carbon energy access co-benefits.

Focus of this component will be on projects that will aid in recycling, up-cycling, waste assessment and sustainable energy use. Thus, projects will aid in energy saving and use of renewable sources as a set of measures and innovative solutions to ensure affordable access to different forms of energy, save energy and reduce CO2 emission, through models that appreciate environmental and ecological aspects.

Figure 5: Installation of Energy saving lights

Component 4: Local to global chemical management coalitions.

Under this component, to mitigate environmental contamination, effective management of contaminated sites in an environmentally sound manner such as chemicals and organic waste through reduction, collection, selection and recycling of the potential polluters of the soil, water and air, with special emphasis on the elimination of the use and reduction of the POPs sources will be emphasized. Successful past projects on POPs will need to be replicated as selection.

Figure 6: Waste management program at an Island

Also, collection and recycling of agricultural plastic foil and PET plastic domestic waste and innovative approach for partnership of NGO‟s with business sector for selection, collection and recycling nontoxic domestic e-waste will be sought. Initiative will be made to promote integrated pest management & phase-out of obsolete pesticides and training activities and awareness sessions on POPs and other harmful chemicals.

Component 5: CSO-Government Policy and Planning Dialogue Platforms.

Focus of this component will be on projects that will aid in promoting, sharing and exchange of experiences and knowledge through forums including knowledge fair, conferences, research and publication and the like.

Figure 7: Sharing and exchange of experiences with students

Component 6: Promoting Social Inclusion.

This component will focus on improving livelihoods and increasing local benefits generated from environmental resources by targeting vulnerable groups such as youth, women and people with special needs or disabilities. Special focus will be given to promote women-led initiatives and projects improving or providing alternative livelihood for women and promote initiatives led by vulnerable groups such as youth and people with special need or disabilities.

Figure 8: Women engagement in agricultural activities

Grant-maker + strategies

3.3.1 CSO-Government Dialogue Platform

At the moment a "CSO-Government Policy and Planning Dialogue Platform" is established in the form of a website and social media page which would facilitate sharing of knowledge and lessons learnt through projects. In addition, "CSO-Government Policy and Planning Dialogue Platform" can be established building on the joint working relationship developed between civil society and government in SGP National Steering Committees (NSCs). Furthermore, exchange visits can be made from one island to the other to exchange the knowledge and to conduct training programs. Mass media approaches including, radio, leaflets and booklets can be developed.
Additionally, the CSO network that would be established under ICCA grants is anticipated to open more windows of opportunities to strengthen the CSO-Government Dialogue.

3.3.2. Policy influence

In order to make GEF SGP OP6 successful, policy influence is essential. In addition, GEF SGP should take part in the government policy making process in order to synergize GEF programs better with the national programs. This will also assist government in policy making since SGP is acquainted with the skills of many environmental projects such as mainstreaming biodiversity into private, projects on species such as turtles and tuna catch, projects on vegetation to meet the demands of an increasing population and economic growth, projects on agricultural practices. Other means of advocating and influencing policy include organizing conferences and seminars, publishing and sharing high quality research papers through a scientific journal, advocating via means of brochures, video spots and social media.

3.3.3 Promoting social inclusion (mandatory)

Although social inclusion is vital component in grant making it is also a big challenge due to the geographical barriers as well as the infrastructure. In order to include people from the islands and different socio-economic backgrounds SGP needs to understand the power dynamics and also the

politics in the islands. Empowering and building capacity of individuals and groups such as women, children and the disabled through training is important to promote social inclusion.

3.3.4 Knowledge management plan

It is important for SGP program to make use of evidence based strategies at all levels to make sound decisions thereby making the program successful and sustainable. Routine data gathering, monitoring, data analysis, data storage, and evaluation are key components for successful SGP program implementation. This can be achieved either through inductive or deductive approach depending on what needs to be studied or evaluated.

3.3.5 Communication Strategy

For each GEF SGP project a communication strategy will be developed. The website and social media and reports will be used to share information on new, ongoing and completed projects. The local gazette is also a form of communication that is used to advertise new projects so that everyone can apply. Other forms of communication strategies that can be used include mass media such as radio and television which can make the communication and dissemination of information very effective. Hence building a good relationship and partnership with media is vital for SGP

3. Expected results framework

OP6 global project components and global targets

Table 5. Consistency with SGP OP6 global project components

OP6 project components	CPS targets	Activities	Indicators	Means of verification
SGP OP6 Component 1: *Community Landscape and Seascape Conservation*: 1.1 SGP country programmes improve conservation and sustainable use, and management of important terrestrial and coastal/marine ecosystems through implementation of community based landscape/seascape approaches in approximately 50 countries	Laws and regulations enforcing biodiversity are strengthen People are aware of the value biodiversity and the steps they can People are aware of the value of biodiversity and the steps they can Take to conserve and use it sustainably The capacity of people including community, CBOs & NGOs to manage knowledge and to participate in biodiversity planning is increased Positive incentives for conservation and sustainable use of biodiversity are developed and applied	Identify and address gaps in enforcing legal frameworks Strengthen Environmental Policy Baseline survey to measure current awareness on biodiversity Conduct general awareness through various mediums Conduct capacity building programs for NGOs, CBOs & island communities Improve participatory capacity of the island communities, NGOs, CBOs and government offices through strengthening financial, technical and human capacity	Number of gaps identified New regulations to address gaps Number of community managed areas under ICCA Number of trained staff Number of cases addressed by Environmental Crime Unit Number of successful lawsuits against biodiversity crimes Baseline survey Number of people reached Perception survey Number of capacity building programmes conducted Number of NGOs and CBOs actively involved in	Individual project reporting by SGP country teams Baseline assessment comparison variables (use of conceptual models and partner data as appropriate) Annual Monitoring Report (AMR) Country Programme Strategy Review (NSC inputs)

OP6 project components	CPS targets	Activities	Indicators	Means of verification
	Pressures on coral reefs and other vulnerable ecosystems due to anthropogenic activities and climate change are minimised Impacted ecosystems that provide essential services related to water, human health, wellbeing and livelihood are restored significantly Prevent extinction of locally known threatened species. Illegal trade of locally protected species is eliminated	Introduce subsidies for conservation friendly fisheries Establish an inventory of sea grass beds, mangroves, wetlands and swamps Asses and identify specific anthropogenic impacts on coral reefs and other vulnerable ecosystems Identify and assess the impacts on coral reefs and other vulnerable ecosystems due to ocean acidification and elevated sea surface temperature Conduct programmes to restore essential ecosystems through addressing pressures, restoration, and providing alternative solutions to prevent destruction and overuse. Identify locally threatened species and establish a database Revise existing regulations and guidelines where necessary Develop and enforce management plans for threatened and endangered species	conservation Number of fishermen involved in conservation friendly fishery Inventories Number of assessments Assessment reports Income generated through biodiversity and ecosystem services Fisheries statistics Number of community based initiatives on ecosystem conservation Number of land use plans addressing restoration of essential ecosystems at local level Survey reports Database on threatened species Number of revised guidelines and regulations on threatened species	

OP6 project components	CPS targets	Activities	Indicators	Means of verification
		Identify routes and pathways of illegal trade and enforce preventive measures to block identified Pathway Identify gaps and amend regulations to address illegal trade	Management plans Population of the species Number of trade routes blocked	
SGP OP6 Component 2: *Climate Smart Innovative Agro-ecology:* 2.1 Agro-ecology practices incorporating measures to reduce CO2 emissions and enhancing resilience to climate change tried and tested in protected area buffer zones and forest corridors and disseminated widely in at least 30 priority countries	Positive incentives for conservation and sustainable use of biodiversity are developed and applied	Introduce subsidies for organic farming	Amount and number of subsidies Number of organic farms	Individual project reporting by SGP country teams Socio-ecological resilience indicators for production landscapes (SEPLs) Annual Monitoring Report (AMR) Country Programme Strategy Review (NSC inputs)

OP6 project components	CPS targets	Activities	Indicators	Means of verification
SGP OP6 Component 3: *Low Carbon Energy Access Co-benefits*: 3.1 Low carbon community energy access solutions successfully deployed in 50 countries with alignment and integration of these approaches within larger frameworks such as SE4ALL initiated in at least 12 countries	Engage private sector participation to develop, manage and sustain electricity services Establish a transparent mechanism to provide targeted subsidies to vulnerable groups to ensure access to basic energy at affordable prices Promote carbon capture and sequestration (CCS) by conducting research and development	Support renewable energy technologies & switching to energy – efficient products and appliances to provide the service Providing subsidies to vulnerable groups such as persons with disabilities & providing cheap alternative sources of energy Restoration and conservation of mangroves, woods and freshwater wetlands Promote integrated arming and sustainable agriculture	Number of private sectors providing sustainable electricity services Number of subsidies Number of vulnerable groups reached Hectares of mangroves, woods and freshwater wetlands with restoration and enhancement initiated	AMR, country reports AMR, global database, 18 Country reports Special country studies Country Programme Strategy Review (NSC inputs)

OP6 project components	CPS targets	Activities	Indicators	Means of verification
SGP OP6 Component 4: *Local to Global Chemical Management Coalitions:* 4.1 Innovative community-based tools and approaches demonstrated, deployed and transferred, with support from newly organized or existing coalitions in at least 20 countries for managing harmful chemicals and waste in a sound manner	Manage contaminated sites in an environmentally sound manner. Mitigate environmental contamination Improved initiatives of CSO and NGOs to prevent, reduce and phase out POPs and other harmful chemicals.	Demonstrate improved handling of harmful chemicals Promote integrated pest management & phase-out of obsolete pesticides Eliminate open-burning of waste and proper wast management initiated Training and awareness on POPs and other harmful chemicals	Number of contaminated sites managed Tons of obsolete pesticide appropriately disposed Tonness of POPs waste avoided from burning Amount of waste recycled, reused and made into compost Number of CSO and NGO initiatives	Individual project reporting by SGP country teams Strategic partnership with IPEN country partners Annual Monitoring Report (AMR) Country Programme Strategy Review
SGP OP6 Component 5: *CSO-Government Policy and Planning Dialogue Platforms (Grant-makers+):* 5.1 SGP supports establishment of "CSO-Government Policy and Planning Dialogue Platforms", leveraging existing and potential partnerships, in at least 50 countries	Promote sharing and exchange of experiences and knowledge	Quantity and quality of contributions to knowledge fair, conferences, research and publication	Number of knowledge fairs, conferences and publications	Individual project reporting by SGP country teams SGP Global Database Annual Monitoring Report (AMR) Country Programme Strategy Review

OP6 project components	CPS targets	Activities	Indicators	Means of verification
SGP OP6 Component 6: *Promoting Social Inclusion (Grant-makers+):* 6.1 Gender mainstreaming considerations applied by all SGP country programmes; Gender training utilized by SGP staff, grantees, NSC members, partners 6.2 IP Fellowship programme awards at least 12 fellowships to build capacity of IPs; implementation of projects by IPs is supported in relevant countries 6.3 Involvement of youth and disabled is further supported in SGP projects and guidelines and best practices are widely shared with countries	Improve livelihoods and increasing local benefits generated from environmental resources targeting vulnerable groups such as youth, women and people with special needs or disabilities	Promote women-led initiatives and projects improving or providing alternative livelihood for women Promote initiatives led by vulnerable groups such as youth and people with special need or disabilities Enhance the collaboration of ICCA network and support the establishment of ICCA	Percentage of projects including gender analysis Number of women-led initiatives Number of projects supporting youth and people with special need or disabilities	Individual project reporting by SGP country teams SGP Global Database Annual Monitoring Report (AMR) Country Programme Strategy Review
SGP OP6 Component 7: *Global Reach for Citizen Practice-Based Knowledge program (Grant-makers+):* 7.1 Digital library of community innovations is established and provides access to information to	A holistic approach to manage and disseminate information and knowledge will be used. Dissemination of knowledge to the public will be through various mass-media products	Obtain services of NGOs and voluntary partners. Establish a digital database. Develop partnerships between youth groups of different countries	Number of country innovations which can be shared at national and global levels. Number of educational exchange trips for youth.	SGP Global Database Annual Monitoring Report (AMR) Country Programme Strategy Review

OP6 project components	CPS targets	Activities	Indicators	Means of verification
communities in at least 50 countries 7.2 South-South Community Innovation Exchange Platform promotes south-south exchanges on global environmental issues in at least 20 countries	(brochure, flyers, videos, posters, songs,) produced by GEF SGP and partners. Also through public media including TV channels and other social media.			

MONITORING & EVALUATION PLAN

Country level M&E plan to monitor the implementation of the CPS

Country level M&E plan to monitor the implementation of the CPS, with particular reference to the targets and indicators set in Table 5.

Monitoring and project evaluation will be done by:

(i) Monitoring visits - A minimum of 1 site visit per project will be undertaken, to monitor the project during its implementation phase.

(ii) Other Monitoring materials including; stakeholder meetings and discussions, phone conversations, documents such as quarterly progress reports, photographs from different stages of the project or video films.

(iii) Progress indicators in the project proposal - each project proposal will include a monitoring and evaluation plan with appropriate and SMART (specific, measurable, achievable, realistic, time-bound) indicators which will measure and assess the results of the project activities and objectives.

(iv) Special Measures – Support from an academic/research institution or NGOs with expertise in GEF thematic areas in order to improve monitoring through documentation of lessons learnt.

(v) Evaluation of projects will be done at two levels:

a) Project assessment or project review workshops will be organized at mid and end of project implementation with the participation of NGO/CBO representatives, NCS members and SGP staff.

b) At the conclusion of project a participatory evaluation workshop will be held.

c) Final report: if necessary a final visit to the project site will be undertaken, after the final report submission to the NSC/NC to verify the success of the project. The project conclusion will be recorded in the GEF SGP database and a final evaluation report made by NSC.

Strengthening and adaptive management of SGP

The individual SGP grantee partners shall be exposed to an introduction & short training session prior to fund disbursement. This session would explain the approach to M&E at all levels, reinforcing the importance for effective M&E throughout projects. A timeline of activities outlining the project baseline dates will be collected along with the project proposal. This timeline of activities would be used to track the progress of the project, and to measure the project achievements and downfalls.

The NC, NSC & SGP team at present has the most active role in the M&E component. Also other collaborative grant-makers provide assistance and support for the M&E process. Support both in terms of human capacity as well as technical expertise is received through these partnerships. A minimum of two site visits are conducted. The initial visit is aligned with progression of projects & before the disbursement of the second tranche. Additional site visits are conducted towards the completion of the projects, unless there are concerns identified with a particular project or grantee requiring extra attention. Apart from site visits, telecommunication is also used to track project progress and conduct M& E, with at least one call per month by the NC & the SGP team.

Reporting is required by the grantee after the initiation of the project and before additional tranches of funds are disbursed. They are required to submit a progress report according to the project monitoring timeline submitted with the project proposal. Also the grantees are required to submit a final project report and a financial report at the end of the project. M& E templates for both progress report and final reports submission are provided by GEF SGP. All the M&E activities carried out during OP5 can be continued during GEF OP6 as well.

Participation of local stakeholders, community members and/or indigenous people

Inclusion of local stakeholders in setting project objectives needs to be reinforced to grantees, during project application phase so that projects are designed with contributions from community & other stakeholders. During the application process, the grantees would need to demonstrate how the community and local stakeholders would contribute & explain their roles in monitoring and evaluation. The site visits by NC & SGP team can obtain feedback from these stakeholders to validate their input to the project. The grantee themselves would be required to include details explaining the role of community and local stakeholders in the project reports.

Strategy for aggregating the results of SGP individual projects

NSC & NC identified the value of SGP projects to the NGO or the local community not being captured. This could be due to the lack of a dialogue platform whereby the results and accomplishments of such projects could be shared as knowledge to other localities and stakeholders. The GEF SGP website is at present the only information source for the SGP projects. The initiation of the knowledge fair would provide a better platform to share the outcomes and accomplishments of the GEF SGP projects. NC also highlighted the lack of bottom-up processes for the expansion of the SGP projects at local community level as national priorities. This again is very much related to the lack of knowledge shared in relation to the successes of the GEF SGP projects. Given in Table 6 below is the M&E Plan at the Country Programme Level.

Table 6: Monitoring & Evaluation Plan at the Country Programme Level

M&E Activity	Purpose	Responsible parties	Budget source	Timing
Country Programme Strategy elaboration	Framework for identification of Community projects	NC, NSC, country stakeholders, grantee	Covered under preparatory grant	At start of operational phase
Annual Country Programme Strategy Review	Learning; adaptive management	NC, NSC, CPMT	Covered under country programme operating costs	Reviews will be conducted on annual basis to ensure CPS is on track in achieving its outcomes and targets, and to take decisions on any revisions or adaptive management needs.
NSC Meetings for ongoing review of project results and analysis	Assess effectiveness of projects, portfolios, approaches; learning; adaptive management	NC, NSC, UNDP	Covered under country programme operating costs	Minimum twice per year, one dedicate d to M&E and adaptive management at end of grant year
Annual Country Report (AC R) 22	Enable efficient reporting to NSC	NC presenting to NSC	Covered under country programme operating costs	Once per year in June
Annual Monitoring Report (AMR) 23 Survey (based on ACR)	Enable efficient reporting to CP MT and GEF; presentation of results to donor	NC submission to CPMT	Covered under country programme operating costs	Once per year in July

Strategic Country Portfolio Review	Learning; adaptive management for strategic development of Country Programme	NSC	Covered under country programme operating costs	Once per operational phase

RESOURCE MOBILIZATION PLAN

OP6 resource mobilization plan

OP6 resource mobilization plan to enhance the sustainability of the SGP Country Programme grant making and grant-makers+ roles with reference to:

(i) Ways to enhance or increase cash and in-kind co-financing at project level, landscape/seascape level and Country level.

At project level the importance of co-financing will be emphasized, as done at present. But a large part of the co-financing received is in-kind. This is due to the limitation of financial resources among the grantees, the communities and other donors within the country. Also the in-kind resources received by the grantees are not fully recorded, hence, most of the time these funds do not get incorporated into the total cost of the projects. Therefore, it is important for the grantees, the CSOs and NGOs to be made aware of different methods and modes of co-financing that could be received to a project, and also provide training on managing such records, to better map out the in-kind and co-financing received for GEF SGP grants. At the landscape /seascape level which is the country level, resources will be mobilized through existing partners and the potential partners identified under section 2.1.

(ii) Diversifying funding sources to achieve greater impact.

The NC and NSC would need to seek other additional sources of funding (non GEF sources), and in-kinds such as resources, training and technical expertise (for CSO & NGO capacity building) from sources such as UNDP CO, private sector organizations such as MATI (Maldives Association of Tourism Industry), Embassies (Indian & Chinese), national and international donors (both bi-lateral and multi-lateral).

(iii) An approach to recover costs to co-finance a share of the SGP country program nongrant costs

With UNDP CO being a prominent development partner, other UN agencies and donor funds could be attained through discussions with existing partners and determining the opportunities for such funding. Also the recent cost recovery guidelines in place could aid in directing funds for GEF SGP management costs.

(iv) Opportunities for SGP to serve as a delivery mechanism

GEF SGP OP5 has been able to demonstrate successful projects and accomplishments, with a considerable knowledge base, encouraging replication and upscaling of these good practices and lessons learnt. Some possible means for replication and upscaling involves:

- Grantees raising co-financing from other sources
- Partnerships with other UN agencies, donors, programs and private sector
- Mainstreaming into existing and proposed developmental plans of the government
- Upscaling and demonstrating project outcomes to impact national policy and legislations.

(v) In the "Grant maker+" role, the SGP team including the NSC and TAGs can be tapped to help communities and CSOs develop proposals to access other donors and funding facilities. While the funds may not go directly to SGP, this activity can be considered part of resource mobilization as there is increased flow of resources to SGP stakeholders through its support.

- How can this role be effectively performed?

  GEF SGP needs to function as a connective body between the funding sources and the CSOs and the NGOs. The NC and NSC can provide information on further sources of funding and assist the CSOs and NGOs in developing proposals to obtain such funds. Also GEF SGP can monitor these other donor funds by registering the sources of funding, documenting successes, failures and the lessons learnt through such donor funded projects.

- What are the possible proposals that can be developed and donors and funding facilities (i.e. perhaps the Green Climate Fund) that can be approached?

  Upscaling and replication of projects with successes and accomplishments can be possible proposals that could be used both by GEF SGP and the grantees themselves to seek further sources of funding. Partnerships with national government agencies, multilateral and bilateral agencies, financial institutions, NGOs and private sector are funding facilities and possible donors for such proposals.

- What are the potential for private sector funding (i.e. in support of successful sustainable enterprises for scaling up)?

  Private sector has been identified as an important sector for additional sources of funding. The emphasis on public-private partnership promotion could initiate more financial support from the private sector. Some potential donors could be National level partners; major

project funds (such as Tourism Adaptation Project, Climate Change Trust Fund etc.)
private businesses within the community, other NGOs, Community groups and resorts etc.

Risk Management Plan

Key risks anticipated in the implementation of the CPS during OP6

The risks identified are at two different levels; the project level and the programme level. Project level risks anticipated includes lack of collaboration and cooperation, inadequate co-funding, low human resource capacity of CSOs and NGOs and inadequate technical assistances.

At programme level risks include political risks affecting SGP operations, change of members for NC and NSC, increased disaster due to Climate Change, human resources constraints of SGP with increased intensity of work. The details for the risks are described in Table 7.

Table 7

Describe identified risk	Degree of risk (low, medium, high)	Probability of risk (low, medium, high)	Risk mitigation measure foreseen
PROJECT LEVEL			
lack of collaboration and cooperation	medium	medium	SGP needs to communicate its role and function to the broader community including the local councils, so that grantees of the projects get better collaboration and cooperation for effective project implementation.
inadequate co-funding	high	high	Communication and identification of possible funds with relevant stakeholders and partners. Focusing on building relationships and gaining commitment by using instruments such as MOUs.

low human resource capacity of CSOs and NGOs	high	high	Attaining assistance from academia to formulate and conduct national level and community level trainings using students, graduates and professionals.
inadequate technical assistances	medium	medium	SGP needs to identify and register professionals from various fields willing to work and volunteer as technical advisers or assistance.
PROGRAMME LEVEL			
political risks affecting SGP operations	medium	medium	Communicating and building partnerships with various government sectors and ministries for effective collaboration.
change of members for NC and NSC	medium	medium	Identification and selection of members who demonstrate commitment and ability to serve a specific time period. Members need to be rotated so that technically skilled and experienced members are selected.
increased disaster due to Climate Change	high	high	Developing and sharing a risk mitigation strategy among all the grantees. Needs to incorporate this into OP6 project development process
human resources constraints of SGP with increased intensity of work	high	high	Need to collaborate and build partnerships with various other working and community groups, donors and volunteers to build capacity for the programme.

Tracking of risks

The risks identified above will be tracked at NSC meetings and determined whether there are any changes or whether any additional mitigation measures are needed. The CPS annual review will also be used to track the risks with required adjustments made.

It is very much expected that with open communications and high level of transparency within the SGP programme, all its network of supporters would assist in communicating all the above mentioned risks to the NC and the NSC. Currently, all the grantees are to submit all possible risks listed out within their project proposals. Hence, SGP can in future introduce a set of risk tracking questions under a revised project reporting template for OP6.

The NSC appreciates that quality assurance is an important component of managing risk and the UNDPs Social and Environmental Standards (SESs) are essential in this area. All GEF SGP stakeholders would be made aware of the SESs through awareness and informative sessions, and advised about UNDPs accountability measures relating to the SESs; the Social and Environmental Compliance Unit (SECU) and the Stakeholder Response Mechanism (SRM).

REFERENCES

(2006). *National Adaptation Plan of Action.* Ministry of Environment, Energy and Water.

(2007). *National Adaptation Program of Action.* Republic of Maldives.

(2007). *Seventh National Development Plan, 2006-2010.* Republic of Maldives.

(2007). *United Nations Framework Convention on Climate Change. Intergovernmental Panel on Climate Change Fourth Assessment Report.* United Nation.

(2009). *Maldives National Strategy for Sustainable Development, UNEP.*

(2010). *Social Assessment for Solid Waste Management.* Maldives Environment Management Project (MEMP).

(2012). *Fourth Tourism Masterplan 2013-2017.* Ministry of Tourism Arts & Culture.

(2012). *State of the Environment Report 2011,.* Ministry of Environment and Energy.

(2014). *National Waste Management Policy.* Ministry of Environment, Energy and Water.

(2015). *Maldives Climate Change Policy Framework.* Ministry of Environment and Energy.

(2015). *National Biodiversity and Strategy Action Plan (2016-2025).* Ministry of Environment and Energy .

Statistical Pocketbook of Maldives. (2015). Retrieved 2016, from National Bureau of Statistics: http://planning.gov.mv/nbs/wp-content/uploads/2015/10/Statistical-Pocketbook-ofMaldives2015.pdf

Dorji, K. (2015). *United Nations Development Assistance Framework (UNDAF) (2016 -2020).* United Nations.

(n.d.). *Maldives National Energy Policy and Strategy – 2010.*

(n.d.). *National Strategic Action Plan 2009 – 2013.*

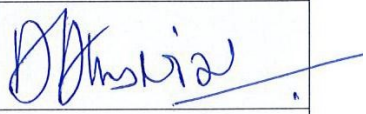
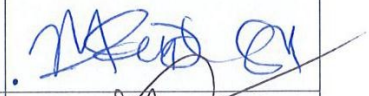
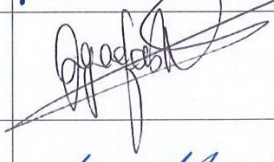
(n.d.). *Regulation for the Protection and Conservation of the Natural Life and character of Old Plants and Trees in the Maldives.* Ministry of Environment, Energy and Water.

(n.d.). *Strategic National Action Plan for Disaster RiskReduction and Climate Change Adaptation 2010-2020.* Ministry of Environment, Energy and Water.

NATIONAL STEERING COMMITTEE

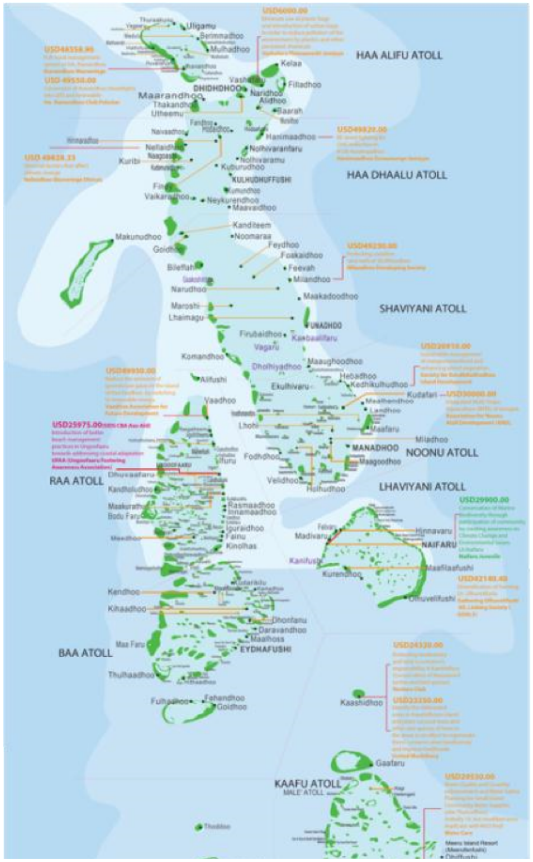
Table 8: National Steering Committee

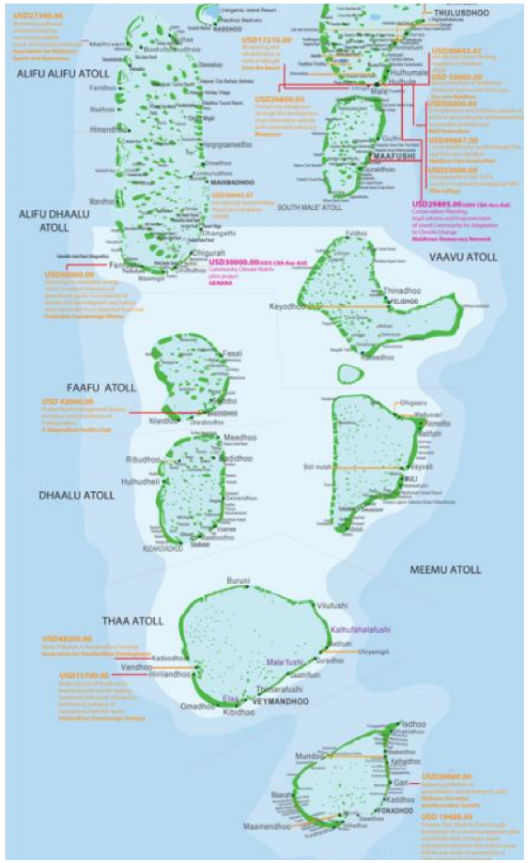
Note: The signature of endorsement at this point is for the complete and final CPS duly reviewed by the NSC and agreed as the guide to the implementation of OP6 by the SGP Country Programme.

NSC members involved in OP6 CPS development, review and endorsement	Signatures
Ahmed Jameel (NSC Chairman) Water Solutions and Eco Care	
Miruza Mohamed Ministry of Environment and Energy	
Ahmed Nizam Maldives NGO Federation	
Ahmed Shaig Commerce, Environment & Development Ltd (CDE) Consultant	
Aminath Shafia Ministry of Fisheries and Agriculture	
Fathimath Shafeega Live & Learn Environmental Educational	
Mizna Mohamed Maldives National University	
Ahmed Ali Ministry of Environment and Energy	
Ibrahim Naeem Environment Protection Agency	
Aishath Azza United Nations Development Programme	
Adam Saaneez ArchEng Studio	

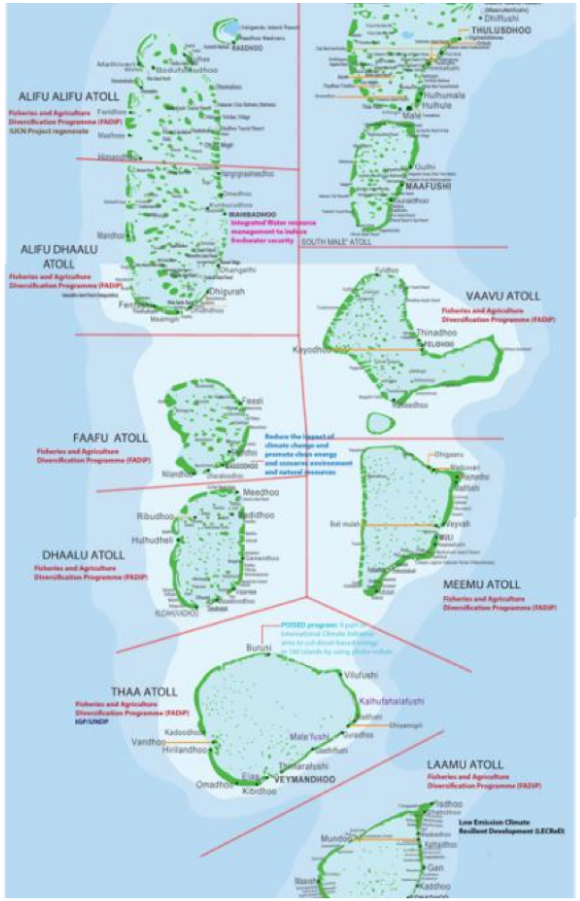
ANNEX

Annex 1: Distribution of projects across the country





Annex 2: Regional focuses of some of the major projects and programmes in the Maldives



Annex 3: OP6 landscape/seascape baseline assessment

Participatory OP6 landscape/seascape baseline assessment (please attach report)

Baseline assessment for thematic areas

This baseline assessment is aimed to determine the present situation of environmental conservation and community development issues in Maldives. Site visits and stakeholder meetings were held to comprehend the current situation and to carry out the baseline assessment effectively. This baseline assessment enabled to gather a clear picture of social, cultural, environmental and economic status of the landscape and the people.

The key issues identified for the environmental conservation are threats to clean water, pollution, land degradation, soil erosion, beach erosion, damage to coral reefs, flooding due to heavy rainfall, management of sewage and wastes. In addition, unemployment and underemployment status of the country is identified as concerns economically. Furthermore, the limited availability of effective governance structures was identified as the key issue for managing of local resources and monitoring of environmental changes. Thus, it is important to identify the basis of these issues and address them through education, training and job creation.

Examining current programmes for environmental conservation and community development is crucial for the landscape baseline assessment. Additionally, this assisted GEF SGP to create synergized partnerships with the ongoing governmental initiatives to further strengthen such initiatives. Furthermore, it assisted in identifying the relationship with the government and local communities as this relationship could affect the conservation intervention and its success. Therefore, each of the key areas studied with their current situation, major concerns and issues surrounding are discussed next, under thematic headings: biodiversity, energy resources, climate change, waste management, water resource management, chemical management, CSO-government dialogue platform, gender equality and social inclusion, and knowledge management and agro ecology and marine resources.

1. Biodiversity

Biodiversity of the Maldives is characterized by a diverse and an abundant coastal and marine ecology that is scattered across the whole country. Marine biodiversity comprising of large mega fauna, over 20 species of whales and dolphins, and 40 species of sharks have been identified in Maldives. Tuna remains the most exploited species commercially. While the reef ecosystem of the Maldives represents the 5th richest reef biodiversity; it is also the 7th largest

reef ecosystems in the world comprising of at least 200 species of stony corals and many associated species (NBSAP, 2015). In addition to being one of the most diverse ecosystems, coral reefs also act as a natural defense against the surging seas and also as a natural replenishment of the sand by which the islands are formed.

One of the unique characteristic of the Maldivian coastal ecosystem is the growth of mangroves that act as a buffer as well as a drainage during floods and other natural hazards. Fourteen species of mangrove plants and many more associated species have been identified in Maldives (NBSAP, 2015). Although not globally significant, the size and diversity of mangrove ecosystems play a critical role in sustaining the delicate balance of island ecosystems in the country.

In addition to the marine ecosystems, over 167 species of birds, of which 5 are endemic to the country, have been identified in the country (NBSAP, 2015). Majority of these are migratory species and protected under Environment Protection and Preservation Act of Maldives (4/93).

The economy and the livelihoods of the people of Maldives are largely dependent on the biological resources of the country. According to the Valuing Biodiversity, 2009, the biological diversity of Maldives contributes to 71% employment, 89% of Gross Domestic Product (GDP) and 98% of export (MHTE, 2009). Industries that directly benefit from biological resources include fisheries, agriculture, tourism and handicrafts. The sectors that depend entirely on biodiversity such as the tourism industry, fisheries and agriculture contribute significantly to the country's GDP.

Laws and regulations on biodiversity

Two main laws have been developed to provide a framework to guide the sustainable use, management and conservation of the country's natural resources, and to protect these resources from degradation and over-exploitation at the national level. They are:

- Fisheries Law (1970)
- Environmental Protection and Preservation Act (1993)

In addition to the above laws, there are other laws that are relevant to biodiversity conservation which includes:

- Uninhabited Islands Law
- Tourism Law

The article 22 of the Maldivian constitution states that it is a "fundamental duty of the state to protect and preserve the biodiversity, resources and beauty of the country for the benefit of present and future generations". It also bestows the same duty to the local councils and gives the right of a safe environment to every citizen. The main umbrella under which the conservation of biological diversity is governed is the Environmental Protection and

Preservation Act (Law no. 4/93) of the Maldives. In addition to the above Act, there are additional legislations that ensure conservation of biological resources. These includes, amongst others, the Liability Regulation of 2011, Uprooting of Trees Regulation, Tourism Act, The Law on the Maldives Fisheries, Plant Protection Act, and Coral and Sand Mining Regulation.

Progress

Since Maldives is highly dependent on its biological diversity and ecosystem services, the pressures on these have substantially increased. However, there also been progress made in some areas.

Maldives being a party to the Convention on Biological Diversity (CBD), prepared the first National Biodiversity Strategy and Action Plans (NBSAPs) in accordance with national policies and the Second National Environmental Action Plan (NEAP II) of Maldives with three main goals: 1) Conserve biological diversity and sustainably utilize biological resources. 2) Build capacity for biodiversity conservation through a strong governance framework, and improved knowledge and understanding. 3) Foster community participation, ownership and support for biodiversity conservation. These goals and their objectives were incorporated into subsequent developmental plans relevant to biodiversity such as the National Adaptation Plan of Action (NAPA), Third National Environmental Action Plan (NEAP III) and Strategic Action Plan of Maldives 2009-2013 (SAP).

However, there has been dramatic changes in the national priorities, governing structures and national policies since the implementation of the first NBSAP in 2002. Some of these include the new constitution of Maldives adopted in 2008 which highlights the importance of conservation and sustainable use of biological resources for the benefit of present and future generations and making protection of environment as a duty of the state and the local councils. Additionally, there have also been changes to decision IX/8 of Conference of the Parties (COP 9) and decision X/2 of COP10 of CBD and to reflect these changes, NBSAP is revised (NBSAP, 2015).

With all these changes and polices, Maldives has continued to increase protected as well as managed areas. For instance, 42 areas, 103 bird species and 14 marine species have been declared protected under the Environmental Protection and Preservation Act with a total area declared protected over 242 km2 (NBSAP, 2015). Furthermore, a ‘sensitive area list’ with 274 environmentally significant areas have been identified by the Environmental Protection Agency and these areas are given careful consideration before approval of any type of development. Also, protection to all migratory species of birds came into effect in 2014 with the migratory bird’s regulation and a further regulation controls import of bird species as pets.

Additionally, the declaration of Baa Atoll as a UNESCO Biosphere Reserve in 2011 can perhaps be one of the most notable achievement for biodiversity conservation and sustainable use along with the establishment of a Conservation Fund that can be used to regulate the biosphere reserve and to promote sustainable livelihood, conservation, education, and research in Baa Atoll. As a result, 7 projects has already been funded for the atoll under this initiative. As a result of the success of this project, the government of Maldives has pledged to make the entire Maldives a UNESCO Biosphere Reserve by the end of 2017 (NBSAP, 2015).

Issues related to biodiversity & impacts

Though there has been progress made in preserving and protecting biodiversity, the country's high dependence on the biodiversity and ecosystem has posed several challenges including lack of appreciation of the value of biodiversity, lack of knowledge and limited awareness among people and inadequate resources.

The increase in population and economic growth has resulted in increased demand for land and modern infrastructure. In order to cater this demand, hasty actions without proper planning and lack of alternative solutions have resulted in the destruction of habitat and species both in land and sea. Increase in population has also resulted in increase in pollution due to introduction of chemicals and non-biodegradable waste. Finding the right alternatives and addressing the demands of development in a sustainable manner has then become a challenge. Adding to these are the challenges associated with the geographic dispersion of the population of the country. Bringing about collective action, good governance, creating awareness, enforcement and long term planning becomes a huge challenge when the population is widely dispersed.

Perhaps, one of the biggest challenge in overcoming these issues is the lack of awareness, generally among everyone, on the values of biodiversity. Bridging this gap will contribute to solving many issues at the grassroots level (NBSAP, 2015). Thus, knowledge management and sharing is fundamental for strategic planning.

Another challenge is the lack of adequate mechanisms to monitor changes and lack of research in the field of biodiversity is a huge gap as well as a challenge. For instance, although, though there are regulations to controls import of bird species as pets, many exotic birds banned by this regulation continue to be imported illegally. Similarly, though 42 areas have been declared protected under the Environmental Protection and Preservation Act, only one area is managed with an effective management regulation. Similarly, while coral and sand mining are controlled through the regulation, it still continues to be one of the core materials in construction and therefore, is exploited. Likewise, although there are Land Reclamation regulations that provide legal framework for minimizing impacts of developmental practices such as land reclamation and dredging on environment, one of the major emerging threats is the destruction of habitats, including reefs, lagoons, beaches and mangroves due to land reclamation, harbor building,

channel construction, seawall construction and many related infrastructure development activities. To this regard, it is estimated that 202 artificial harbors have been constructed and over 10 km^2 of lagoon and reef area modified for land reclamation purposes (NBSAP, 2015). Consequently, the limited knowledge among people and decision makers on the value of biodiversity is a barrier which could only be overcome with detailed valuations of the biodiversity and ecosystem services, and when these values are integrated into national accounting.

Moreover, encouraging and supporting indigenous knowledge is essential to address many of today's challenges, including the effects of climate change since indigenous knowledge is a key resource that needs to be stimulated to promote biodiversity, support livelihoods and food security which are under threat due to climatic changes. Indigenous knowledge is also essential for conservation of critical ecosystems and threatened species, to maintain essential ecosystem functions (e.g., water security), and to provide corridors and linkages for animal and gene movement, including between two or more officially protected areas.

Lastly, capacity at both government and private sector in many areas including technical, technological and human capacity of enforcement agencies and in local communities including CBOs and NGOs is limited. Thus, private sector role is crucial especially when the economy of the country is dependent on biodiversity and lack of this role creates a huge gap that needs to be overcome.

2. Energy resources

Maldives is a country that is highly dependent on imported energy sources since there is no access to conventional energy sources. The main energy source the country highly depend on is fossil fuels imported from the global market. As a result, the country's energy security is threatened which in turn affects the economic progress and social development of the country. The country needs sufficient energy supplies for the economic growth, food security, delivery of crucial public services, social equity, protection of vulnerable groups such as women and children and to govern all inhabited islands (Maldives National Energy Policy & Strategy, 2010).

It is impossible for the country to provide electricity through a countrywide power system. Small, electric generators are used to provide electricity to individual islands. In order to operate these generators, Petroleum-based fuels are the most imported fuels to the Maldives. According to statistics; Maldives spends over $470 million to import oil; from which; the largest is consumed for power generation. The country's demand for electricity is anticipated

to double by 2020, due to the increased electricity use in resorts. The country is working on developing alternative energy sources to support energy efficiency initiatives (Maldives National Energy Policy & Strategy, 2010).
During 1990s, the availability of 24-hour electricity was for about six islands. However, by 2008 this access was made available in all the inhabited islands. It was the State Electricity Company (STELCO) authorized for the production and supplying of electricity to about 40 islands and the island cooperative for the respective islands. In 2009 the government developed six new regional utilities to be responsible for electricity supply in the non-STELCO licensed areas. These utilities were integrated into FENAKA- a new utility company to supply electricity, water and sewerage services on the outer islands in 2012. STELCO and FENAKA used 120 million liters of diesel in the year 2012 in order to produce electricity (Maldives National Energy Policy & Strategy, 2010).

Due to the significant growth in developmental activities at regional and national level, there has been a surge in the consumption level of energy. This has led the government to restructure its transport network using regional centers to accommodate the growth demands. Privatization, opening the markets to the energy suppliers and encouraging the use of renewable energy are key strategies employed by the government to meet these demands. Moreover, the government aims to gain carbon neutrality by 2020 to increase energy efficiency and reduce the country's fossil fuel usage. By increasing energy efficiency, the government anticipates to develop the energy sector and increase jobs opportunities (Maldives National Energy Policy & Strategy, 2010).

Governmental bodies established to ensure energy efficiency

1. Ministry of Environment, Energy and Water (MEEW)- to oversee the Energy, Environment and Water Related Matters

2. Maldives Energy Authority- organization Mandated to Regulate Energy Sector

Organizations Involved in Energy Supply includes:

- State Electric Company Limited (STELCO). To provide electricity to 27 of 199 inhabited islands with the capacity of about 35% of the whole country.
- State Trading Organization (STO). Designated in importing diesel, gasoline, LPG, kerosene and aviation fuel. Moreover, has the license to re-export the products.
- VILLA, Private Operators and Communities in Atolls
- Tourist Resorts

- Associations, NGOs, Civic Societies and Private Sector

There are also numerous private organizations, civic societies and associations who contribute to the development of energy sector exclusive of the governmental entities. For instance, in few islands the electricity is provided by private parties. Also, there are limitation in the transportation and distribution of fuel to the public-private parties (Maldives National Energy Policy & Strategy, 2010).

Laws and regulations on Energy Resources

The laws and regulations developed to ensure energy efficiency in the country, include:

- Formulate energy Act/Law
- Legal framework to provide incentives for renewable energy technologies, energy efficiency and energy conservation.
- Revision/establishment off Maldives electricity regulation and standards
- Establishment of Maldives energy standards
- Ensuring inclusion of energy efficiency and conservation measures in the relevant sector codes: water, transport, waste management, heating and cooling, building code and the residential sector.

Progress

Though, the country is heavily dependent on imported fuel, the government has put numerous efforts to increase the energy efficiency in the country. The Initial Environmental Examination project was designed in 2014 for the outer islands in order to enhance renewable based sustainable energy sector in the Maldives (Ministry of Environment and Energy, 2014). Also, solar energy is being used to heat water in some resorts and pilot testing for rooftop has been completed in Male'. Moreover, the rooftop installation has been ongoing in the atolls too (Maldives National Energy Policy & Strategy, 2010).

Issues related to Energy efficiency

Maldives; having no access to petroleum, gas or coral resources to produce energy; and not being able to produce energy using hydropower due to its geography has numerous challenges to the country's energy demands. The dependency on fuel imports has been the main challenges the country faces in terms of energy efficiency. This can be a huge threat to the country, since variations in oil prices in Asia and Pacific can negatively affect Maldives. According to the governments statistics the fuel imports has worsened since 1990 with the total

imports from 15.8% to 31.0% in 2012. The only commercial fuel available are the firewood and the liquefied petroleum gas which are used for cooking in the households.
Exploration of other sources of energy such as wind which is available at an attractive speed is not viable because studies have shown that it cannot be obtained throughout the year. However, since Maldives receives over 2700 hours of sunshine each year, the government is moving towards harnessing solar energy to be used commercially and to integrate into power system (Maldives National Energy Policy & Strategy, 2010).

The changes in the energy sector and the limited capacity to undertake the activities that require in the emerging legal and regulatory frameworks is another challenge for the country (Maldives National Energy Policy & Strategy, 2010).

Insufficient financial support availability to invest in the sector is another challenge faced in overcoming the cash flow generation within the utilities. In order to overcome the inadequate financing, the government need to use co-financing and invite private sectors to join in the energy sector (Maldives National Energy Policy & Strategy, 2010).

Limitations at the sector level planning is also a challenge faced in the energy sector. Although there were individual cooperatives for each island to provide electricity, they have been combined to form two utility companies named STELCO and FENAKA to provide electricity to the whole country. The government is on the phase of developing a medium-term sector plan in order to overcome the limitation in the sector level planning (Maldives National Energy Policy & Strategy, 2010).

Low levels of energy efficiency are another challenge in the country's energy sector. There are several measures to be taken to overcome the low levels of energy efficiency identified by a government task force. For instance, measures for public building and generator upgrades. Moreover, the isolated population in the islands also increases the cost to deliver electricity to all islands Maldives National Energy Policy & Strategy, 2010).

The country also has number of barriers for renewable energy investment such as, i) absence of frameworks explaining the roles of different agencies in renewable energy development, implementation and monitoring ii) absence of standardized instruments (Maldives National Energy Policy & Strategy, 2010).

3. Climate change

The Maldives believes that climate change is the 21st Century's greatest development and security challenge. Climate change threatens the integrity of Earth's climate system and ecosystems. Negative effects are already taking place and these will gravely affect the sustainable developmental activities in place and threaten the survival and sovereignty of the nation and its people. Longer-term impacts such as sea level rise could result in the unavoidable out-migration (Maldives Climate Change Policy Framework (2015).

One of the greatest developmental challenges Maldives face is from threats that occurs due to climate changes. Negative impacts from changes in climate can gravely undermine developmental efforts that are implemented towards survival and the sovereignty of our nation and people (Maldives Climate Change Policy Framework (2015). The Maldives as a small island state is faced with enormous development challenges due to the dispersal of our population across many islands, issues of economies of scale and environmental challenges. Climate change impacts exacerbate existing cultural and socio-economic vulnerabilities. These impacts threaten the security of our nation.

Laws on climate change

Legislature Environment Protection and Preservation Act 4/1993 EPPA
Tourism Act
Fisheries Act
Transport Act
Public Service Act

Policies on climate change

National Development Plans Strategic Action Plan 2009-2013 (SAP) 2009
Seventh National Development Plan (7th NDP) (2005)
Vision 2020 Policies
National Water Policies (being developed)
National Energy Policy (2010)
National Security Policy (2012)
Maldives Foreign Policy (2014) Strategies
National Sustainable Development Strategy (NSDS) (2009)
National Food Security Strategy (2012)
Strategic National Action Plan for Adaptation and Disaster Risk Reduction (2009)
Maldives Climate Change Policy Framework 2015 - there are five goals to be achieved strategically under Maldives Climate Change Policy Framework 2015: which are

1. Sustainable financing
2. Low emission development
3. Adaptation and opportunities

4. Capacity building and leading advocacy at climate negotiations
5. Fostering sustainable development

Issues related to climate change & impacts

The challenges Maldives faces in the context of climate change and development are similar to other small island countries. Among the many challenges Maldives face in the context of climate change include extremely high population density, high levels of poverty, expensive transport, an economy that is physically isolated from world markets but highly susceptible to global influences. At the same time, because Maldives is a small, low lying island nation and due to its limited ecological, socio-economic and technological capacities, its vulnerability to climate change impacts and associated disasters is significantly greater (Maldives Climate Change Policy Framework (2015).

Key challenges reported in the National Adaptation Programme of Action (NAPA), an initiative undertaken to assess and address urgent and immediate climate change adaptation needs, mentions extensive erosion, impacts on critical infrastructure, tourism, fisheries, human health, water resources, agriculture, and food security as the immediate sectors where climate change impacts are significant in the Maldives, thus making climate change in Maldives a multifaceted challenge (Maldives Climate Change Policy Framework (2015.). The impact of climate change in Maldives is relatively high due to the fact that the country is just less than 1 m above the sea level and due to threats from numerous human activities. The major areas vulnerable to climate change includes management of coastal zone, critical infrastructure, tourism, fisheries, human health and water (Maldives Climate Change Policy Framework (2015).

The country ‘s coastal zone is severely affected and is experiencing severe beach erosion. The effect has been increased because of the land reclamation and other human activities, for instance; construction of poorly designed coastal infrastructure, poorly engineered coastal protection measures, removal of coastal vegetation, and sand mining. Moreover, the country’s most critical infrastructures; Male’ International Airport, tourist accommodation, powerhouses etc., are situated within 100m of coastline, thus are prone to the impacts of beach erosion. Furthermore, the tourism industry faces number of indirect consequences related to beach erosion (Maldives Climate Change Policy Framework (2015.).

The fisheries industry of Maldives is susceptible to any changes to the climate since fishing is tuned to the biophysical conditions of the pelagic environment. It is recorded that the previous El Nino had affected to the Indian Ocean purse seine fishery (Maldives Climate Change Policy Framework (2015.).

Similarly, there are evidence of direct effect to the human health due to the changes in climate since it has altered the temperature and rainfall regimes causing increase in vector-borne diseases. Moreover, the primary source of drinking water for most atolls are rainwater, though

Male' has 100% access to desalinated water, so the changes in rainfall regimes would have a direct effect to the shortage of water (Maldives Climate Change Policy Framework (2015.).
Additionally, the impact of change in temperature and rainfall is also affecting the fisheries and agriculture sector of the country causing food security problems resulting nutritional issue in children and overall health of the population. The food security of the country is known as one of the critical sector vulnerable to the changes in climate since the country is highly dependent on the imported food and meat other than the fresh tuna and coconut. Furthermore, there is a limited availability of emergency storage systems and the tradition of ad hoc distribution poses risk for food security (Maldives Climate Change Policy Framework (2015.).

4. Waste management

Solid waste management is one of the critical environmental issues in Maldives and the problems are more pronounced at the island level where space is limited and the islands are spread over a large geographical area, making it difficult to implement waste management strategies (Ministry of Tourism, 2015).
An estimated 860 metric tons per day (mtpd), or 312,075 metric tons (mt) per year, of solid waste is discarded in the Maldives of which about 21% is attributed to tourism with the balance divided among urban areas (65%) and island communities (35%) (Ministry of Tourism, 2015. On average, an individual produce 2.8kg of waste per day in Male' and around 0.66kg of waste in the atolls on a daily basis. An estimated 134 mtpd of solid waste is generated by the 101 resorts in the Maldives; whereas, the safari vessels (157 boats) discarded an average of 8.0 mtpd (Ministry of Tourism, 2015).
An organized means for waste disposal in the country at present in very limited. For Greater Male' region a lagoon-fill site at Thilafushi is being used with waste disposal programmes being conducted at different island levels; administered by the Maldives Environment Management Project and funded by the World Bank (Ministry of Tourism, 2015).

Current waste management practices

The lagoon of Thilafushi island has been used to dispose of waste since the early 1970s and is used as waste management treatment and disposal facility for Male' and other areas of the Maldives that choose to deliver waste to the site. The site operation program includes open burning to reduce the volume of waste for disposal. In addition to waste disposal, this constructed island is also now being used for industrial activities (Ministry of Tourism, 2015).
Household wastes are collected either by the householders or private operators and may be taken to an Island Waste Management Center (IWMC). Current operations involve the delivery of waste to the site by boat. Discards from Male' are loaded into lorries and ferried to the

island. The lorries are uncovered so that the waste may be blown or slide-off a lorry. During passage to Thilafushi on a barge, waste may end up in the sea (Ministry of Tourism, 2015).
Once the ferry reaches the island, waste is unloaded from delivery vessels by an excavator into a site lorry that will take the waste to the disposal area, where waste gets unloaded. At this site, the volume of waste for actual disposal is reduced through open burning which can present a dark smoky plume of particulates leaving behind smoldering that can be toxic (Ministry of Tourism, 2015).
At islands, the household waste is taken to the designated disposal sites or to the edge of inhabited areas and discarded in low lying areas in woody sites. These sites are usually not controlled and managed, and situated along the vegetation and shorelines. The unmanaged wastes are then burnt in a low combustion temperatures, which enters the islands lagoon systems and contaminates it with airborne diseases. The country has not yet established a system for collection, treatment and disposal of harmful waste. The waste put on the beach is visually unsightly both for island residents and people on other nearby islands. Waste thrown on beaches below the high tide line can be entrapped by rising water and float into the sea where it may sink to the sea bottom or onto reefs or wash ashore on other beaches (Ministry of Tourism, 2015).

Legal and Institutional framework on waste management

Management of waste is regulated by Environment Protection and Preservation Act of Maldives (Law 4/93) and Waste Management Regulation 2013/R-58
The Waste Management Regulation is implemented by the Environment Protection Agency of the Maldives through the Local Councils. According to this regulation, local councils are required by the Local Government Act to collect and dispose of the waste produced in the local area. This requirement aims to promote and improve the environmental well-being of the people of local council area. Each local council can make its own decisions as to the method and timing of waste collection. The local councils or their agents have to deal with all wastes, such as all household waste, street litter, municipal parks and garden waste, council office waste and some commercial and industrial waste (Ministry of Tourism, 2015).

Issues, environmental threats and Challenges

Main challenges faced in proper managing of wastes includes transportation costs, lack of infrastructure, remoteness, lack of a cost recovery mechanisms and appropriate technologies; limitation of available land resources that can be allocated for waste management activities such as landfill site; heavy dependence on ground water resources, improper management of waste could result in complete contamination; decentralized populations over a wide geographical area resulting in increased costs, and difficulties of providing waste management services to the different populations on a series of islands; limitations to implementing the

taxation base for a proper waste management system due to low populations on most island states (Ministry of Tourism, 2015).

In addition to the above-mentioned issues, rapid population growth, the uneven distribution of the population over a widely dispersed set of islands along with changing consumption patterns has worsened the waste management situation (Ministry of Tourism, 2015).

Waste management is one of the main challenge that remains in Maldives, which needs to be addressed through a waste management regulation. Thus, Maldives has ratified a waste management regulation and was in effect in 2014. This regulation addresses the management of different types of waste and hopes to minimize the hazardous effect on biodiversity and environment (Ministry of Tourism, 2015).

5. Water resource management

Water is a renewable natural resource and is indispensable for life and the society. It is also a source of energy and a means for transportation. Water is a scarce resource and vulnerable to environmental changes. This became evident during the Tsunami that occurred in 2004 and the water crises that occurred in 2014. The 2004 Tsunami destroyed several lives due to flooding; contaminated ground water. The water crises that occurred in 2014 due to a fire explosion brought down the desalination plants in the Water Authority that resulted in the whole of Male', the capital city to live without water for drinking or for any domestic use for almost a week that (Shakeela, 2015).

Though a vast area of the Maldives is surrounded by sea, Maldives has scarce fresh water resources. Unlike other countries, the Maldives does not have any rivers or streams, except for a few wetlands or freshwater lakes locally known as 'Kulhi'; found in few islands. Thus, the main sources of fresh water come from ground water and from rainfall. Maldives receives an annual rainfall of 1,972 mm. Accordingly, the total annual renewable water resources are estimated at 0.03 km3 (300 million m^3), which consist mainly of groundwater. The per- capita annual water resources are 95 m^3 (IGES, GWP South Asia, 2012). As stated, the country's 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. Thus, fresh groundwater, is a valuable source of water for the Maldives, particularly for the larger islands. However, increasing demand on water resources over recent years has seen an increase in levels of aquifer saline infiltration and groundwater contamination from septic tanks with increasing threats from climatic and anthropogenic stresses such as changing rainfall patterns, sea-level rise and contamination from human activities (Shakeela, 2015).

Progress

Maldives has achieved improvement in providing safe drinking water to people through improved rainwater collection and storage capacity, installation of desalination plants and

establishment of integrated water management systems for both rainwater and desalinated water. Desalinated water is distributed through a piped network is mainly used for drinking as well as for other domestic purposes for the population living in Male'. Also, it is very common to find people using bottled water for drinking among the population residing in Male'. The main sources of water for drinking and other domestics purposes in the islands comes from either rain water which is tapped from roof and collected into various types of tanks or from ground water (Shakeela, 2015).

Laws on Water resource

Activities and relations in the field of water management are regulated by:

- Environment Protection and Preservation Act-Law No. 4/93; Regulation on the Protection and Conservation of Environment in the Tourism Industry implemented under the Maldives Tourism Act - Law No. 2/99

The state bodies that formed the institutional framework for the water resources Management are:

- Ministry of Environment, through subordinated institutions: Agency "Environment Protection Agency"
- Local Public Authorities (Maldives Water and Sewerage Company Ltd).

Issues related to water resource management & impacts

Challenges associated with water is of particular concern to the Maldives as there is limited availability of freshwater, high dependency on desalinated water, and high unit cost associated with desalinating water. In addition, the depletion of freshwater lenses due to abstraction of water for municipal use causing saltwater intrusion. This results in contamination of freshwater thereby making it difficult to obtain water that is safe for drinking or even other domestic purposes. Hence, even though groundwater is recharged by rainfall, it becomes contaminated while percolating through the soil, which is generally polluted with organic and human waste (Shakeela, 2015).

Moreover, there is little effort put into rectifying the polluted ground water. As a result, ecosystem continues to degrade due to the increased pressure on ground water. Over the years, availability of fresh water has worsened to such as extent that the ground water is not safe for any kind of use due to high levels of contamination of the ground water in the capital city Male'. Similar to Male', over construction and sewage pollution due to human activities, has led to ground water contamination in most islands in Maldives. Additionally, due to the low-lying nature of the islands and saline intrusion has contaminated the fresh water lens. Thus, the

freshwater-seawater interaction need to be carefully managed to minimize the impact and over exploitation of water resources.

In Male' sanitation practices are attained through a sewage system which connects the whole households with pumping stations to deep-sea outfalls. However, the sanitation practices in most islands are achieved poorly with the use of septic tanks which are soak pits that leaks sewage to the porous soil polluting the aquifer. In addition, small-bore systems are used in seven islands for managing sanitation. The small-bore system disposes the raw sewage into the littoral water, polluting the water and making it unhealthy to be used (Shakeela, 2015). In addition, the islands are affected by water-logging and build-up of salinity. Also, pollution and intrusion of salt water is an emerging problem due to population increase, agricultural and industrial activities. The low level of organic matter in the soils is conducive for leaching of pesticides and fertilizers into the groundwater. However, in some islands mechanized irrigation systems such as pumps are used to draw water from a number of sunken wells through large hoses. Water application is not efficient as a substantial part of water is evaporated. There is a need to find more efficient irrigation methods (Zuhair, undated)

6. Chemical management

Chemicals are an integral part of daily life as there is hardly any industry where chemicals are not used and there is no single economic sector where chemicals do not play an important role. Such increase in chemicals would make it difficult to manage chemicals appropriately in environmental sound manner; especially for small island nations such as the Maldives. Unsafe chemical use and unsound waste disposal can cause severe damages including death, impairment of health and ecosystem degradation, especially in situations of poverty. Moreover, there is a greater risk of exposure to toxic and hazardous chemicals and wastes for the poor, who routinely face such risks because of their occupation, poor living standards and lack of knowledge about the detrimental impacts of exposure to these chemicals and wastes. Besides, many of the poor enter the informal sector of the economy where they may encounter new kinds of toxic hazards such as electronic and electrical waste (e-waste). Children are particularly susceptible to the negative health impacts of chemicals due to their rapid growth and development and greater exposure relative to body weight

In the Maldives, with demand for the use of chemicals increasing, it would make it difficult for the Maldives to manage chemicals appropriately, especially disposal of the used chemicals in an environmental sound manner. Maldives lacks experience and expertise for sound management of chemicals. For the Maldives, taking into consideration the special vulnerability of small islands environment, development of international chemicals management systems would be way to manage its chemicals. However, lack of capacity and resources are the critical barriers for the development of effective chemical management systems.

A key initiative that is in place to address issues surrounding chemical management is the National SAICM project with broad scope covering environmental, economic, social, health and labor aspects of chemicals at all stages of its life cycle. The target of the SAICM National Implementation Plan is to describe measures which address the WSSD 2020 goal which includes: establishment of an infrastructure for chemical waste management, strengthening national chemical coordination mechanisms, building capacity and technical infrastructure, raising awareness among policy makers, public and other stakeholders are key goals of this plan.

Regulations on chemical management

The import of chemicals is regulated by the Ministry of Defense and National Security (MDNS). Law No. 17/77 (The Law on Drugs) and Law No. 4/75 (The Law on Items Prohibited to be Brought in to Maldives) deal to regulate import of prohibited chemicals used as drugs, drug precursors or explosives. Import of other chemicals is regulated by the MDNS in consultation with the inter-sectoral committees. There is no control on the quality of the chemicals and labeling. There is no pesticide registration committee. This regulation addresses management of different types of waste, including pollution and chemicals. Enforcement of this regulation will minimize impacts of waste, pollution and chemicals on biodiversity and environment (MOFA).

Issues related to chemical management & impacts

Issues related to chemical management and its impacts includes: low awareness, knowledge and technical capacity. There is also lack of awareness among the community on the impacts of chemicals and heavy metals on human and ecosystems.

On top of having lack of awareness, issues related to lack of national and local policies, standards and procedures in chemicals, heavy metals and handling of wastes are issues that needs to be addressed in order to combat such issues as there is a lack of national level policies, standards and procedures and its implementation with regard to handling of chemical wastes.

Moreover, lack of alternative livelihoods or environmentally friendly alternatives to chemicals and heavy metals in use pose as further threats. The use of harmful chemicals and heavy metals for economic activities can have negative impacts on the livelihoods, without them being aware of such harm. For instance, the use of pesticides for crops can cause health risks to farmers without them being aware of such risks.

7. CSO-Government dialogue platforms

Civil society is crucial for the development and understanding of democratic societies and also a key actor of local and national level development. Civil society organizations are also often the channel through which marginalized groups can make their voices heard. They are also an

essential means, not only of protecting and promoting civil, political, social and economic rights, but in promoting social cohesion and peaceful means in resolving conflicts in an increasingly tense political context. The Civil Society Organizations' roles are therefore, essential in policy formulation, safeguarding rights, articulating interests and delivering social services. CSO promotes accountability and transparency of the political system, developing efficiency and participation in public affairs and strengthening of rule of law (UNDP, 2011). For these reasons, there has been an increased recognition of the importance of CSO for the good governance and socio-economic development. Moreover, all the rights and freedoms are provided in the constitution for the development and growth of CSO in Maldives. The importance of CSO in the development and service delivery is also acknowledged in the Decentralization Act of the country (UNDP, 2011).

There are over 1200 civil society organizations registered in Maldives, according to a study conducted by UNDP on "The Comprehensive Study of Maldivian Civil Society" conducted in 2011. The study also states 25 areas of work carried out by CSOs including: sports, music, arts and leisure activities; social development, volunteerism, service and peacebuilding, economic and business development, employment and income generation; education, training and learning improvement; (sustainable) development; empowerment of vulnerable groups; environment protection, climate change response and wildlife protection; healthcare and healthy lifestyle promotion; profession, sector and industry promotion; building people's skills, character, capacity and conduct; religiosity and religion; Maldivian culture, heritage and history; civic engagement and participation; prevention of drug use and drug trade; welfare to deprived groups or individuals; human rights; equity, social justice and inclusion; good governance and democracy; safe and protective environment; infrastructure development; disaster and emergencies response; media and journalism; bilateral and regional relations; science and technology; and wellbeing and quality of life improvement

While there are a number of key NGOs contributing to the development of a participatory and democratic culture through capacity building activities and engaging in partnerships with local governments and community-level organizations, further efforts are needed to strengthen civil society networks and links between CSOs working at a national and local level, particularly in the areas of advocacy and partnership building with public and private sector for effective service delivery.

Laws

Laws that support CSOs activities:

- Associations Act of 2003
- Decentralization Act
- Employment Act
- National Strategic Action Plan 2009-2013.

Most of these CSOs are formed with few enthusiastic and committed youths who want to contribute to their society and country (Comprehensive Study of Maldivian Civil Society, 2011) and thus, it is worth to credit the CSOs for their dedicated work for the betterment of different communities and the country as whole. Furthermore, most CSOs partner with other organization to carry out their activities. Collaborative partnerships are recognized to be important and popular in conducting recreational activities. However, it is not always easy to carry out all forms of CSO activities in collaboration with other organization and it depends on the type of work been done. Some CSOs promote implementation of public policies, by collaborating with the respective authorities and parliament members, while others try to encourage local interest policies, such as 'Environmental Policy' (Comprehensive Study of Maldivian Civil Society, 2011).

There is also competition among the CSOs with the limited resources available, thus leads to hostility. The lack of knowledge and skills of the members of CSOs to deal such issues is known to be the main reason for the competition. Moreover, the increase in number of CSOs in a single community is another reason for the cause of competition, but it is believed that the competition does not affect their social relationships. In addition, the difficulty in communicating and traveling between islands is found to hinder the relationship among CSOs and organizations. However, some CSOs point that there are few organizations who maintain a good relationship with the CSOs (Comprehensive Study of Maldivian Civil Society, 2011).

Issues related to CSO-Government dialogue

Though there are numerous CSO in Maldives, there are several challenges that impede them from functioning and expanding their activities. One of the challenges is that the CSOs are now only recognized legally through the Decentralization Act although they were included in the service delivery, development planning and implementation of different local and national developmental activities (Comprehensive Study of Maldivian Civil Society, 2011). Another challenge for CSOs to fully function is the limited financial supports and the lack of policy for the Non-Governmental Organizations (NGO) sector. The CSOs are registered under NGOs. It is estimated that around 25% of the CSOs function adequately despite the lack of financial supports available within the country and ways for income generation (Comprehensive Study of Maldivian Civil Society, 2011).

The high dependency to function the CSOs by volunteerism is found to be the main issue to CSO-Government dialogue. However, it is apparent from the activities by CSOs, that the volunteers are dedicated to the sector. Moreover, most CSOs did not demand for a payment, but requested funds and training in order to improve their activities. Thus, this spirit of volunteerism should be fostered (Comprehensive Study of Maldivian Civil Society, 2011).

Lack of capacities and competencies in the sector regarding a) organizational development and management, b) subject-related knowledge and c) financial management and sustainable fund-

raising are also major issues in CSOs efficiency. In order to solve the key issues in the sector, there is a need for more Specialist CSOs who has the comprehensive knowledge about the issue. However, it is the fact that the only specialist CSOs are based in Male' and has lack of knowledge and experience of the context and issues of the particular island (Comprehensive Study of Maldivian Civil Society, 2011).

In addition, the sector being operated mainly by volunteers there is a risk of high turnover among the volunteers. It is for the reason that they might not have sufficient time to dedicate for the voluntary services because of the need for higher level of income. In order to maintain skilled personnel in the sector it is required to consider some forms of compensation. Thus, the sector has problems to make it professionalized. The reason is that it would be costly and there is the feat of losing the volunteerism in the sector which could be a disadvantage to the sector (Comprehensive Study of Maldivian Civil Society, 2011).

It is a risk to be taken if the CSO activities are changed in a form of a project which needs to be achieved in a fixed budget and planned time frame. It is the fact that the current practice of CSO activities avoids some issues related to CSOs in other contexts (Comprehensive Study of Maldivian Civil Society, 2011).

It is also recognized the importance of certification and development of standards in relation to the sectors, so that the capacities and competencies of the sector will be enhanced in the future. Furthermore, certification would enable the country to develop the required human resources for the social, economic and political work with the skills and knowledge (Comprehensive Study of Maldivian Civil Society, 2011).

8. Gender equality & social inclusion aspects

Country overview on gender equality & social inclusion

Empowering women and promoting gender equality is crucial to accelerating sustainable development. Ending all forms of discrimination against women and girls is not only a basic human right, but it also has a multiplier effect across all other development areas. According to the 2014 Asian Development Bank report on Maldives Gender Equality Diagnostic of Selected Sectors, gender gap index of Maldives is at the 95th place out of the 135 countries ranked (ADB, 2014).

Recently, Maldives has seen a significant improvement towards gender equality, in literacy rates, enrollment and achievements at primary, secondary and tertiary levels and have been recognized for the strong performance in educational attainment. However, there are areas that are still needed to be addressed, such as political, health, economic and social empowerment of women (ADB, 2014).

There have been three policies for gender equality being identified in the government's recent National Strategic Action Plan 2009-2013. They are i) develop and activate the necessary

policy, legislative and institutional framework for gender equality, ii) empower women to facilitate their equal access to available opportunities with equal outcomes and results, and iii) cultivate a culture of nondiscrimination and respect for women's rights (ADB, 2014).
However, the progress towards achieving the gender equality and women's empowerment (Millennium Development Goals 3) is slower due to the tradition of inequalities between Male and atolls. Thus, it has been restated the commitment of the present government towards Women's Empowerment Policy and requests all the agencies to promote and contribute to the women's economic and political empowerment. In order to promote gender equality and women's empowerment, the government has promised to i) enhance women's economic empowerment, and ii) ensure zero violence against women or any form of harassment or women. Other commitments include eliminating barriers for women to join the work force, iii) opening opportunities for women's greater participation in the political sphere iv) protecting families from the negative impacts of divorce and v) ensuring equal distribution of matrimonial property after divorce (ADB, 2014).

Policy and institutional environment for gender equality

Though the country follows the traditions of Islamic teaching where men are given a more productive role in terms of work, there are several policies and institutional environment for gender equality in place to minimize the gender gaps in Maldives. According to ADB (2014), a conducive environment has been established in Maldives to address the gender equality gaps through (i) international agreements and conventions ratified by the Maldives and their translation into national laws and policies that promote gender equality and support gender mainstreaming, (ii) institutional mechanisms created to implement such laws and policies, and (iii) actions undertaken to address gender gaps. which include:
Constitution of the Maldives provides the legislative framework to promote women's empowerment and gender equality and there are laws and policies that promote women-friendly conditions of employment and women's participation in cooperative societies. In this regard, there are several Acts that are in place to empower women which includes:

- The Employment Act
    - Women's participation in local governance is mandated by law.
- The Decentralization Act
    - Existing legislation on marriage and family relations has the potential of providing women the leverage to negotiate the terms of their relationship in marriage.
- The Family Act
- Domestic Violence Act
- There is a National Gender Equality Policy.
    - The National Gender Equality Policy and Framework for Operationalization

(ADB, 2014)

In addition, Maldives has undertaken international commitments to promote gender equality by ratification of the "Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)".

Issues related to gender equality & social inclusion & impacts

Maldives is country that is defined in its constitution as a 'sovereign, independent and democratic state whose principles are based on the principles of Islam' and follows the Islamic teachings as the basis for the country's Family Act. In addition, ensuing Islamic tradition, men are regarded as the head of the family who is responsible for the household and in making decisions. Moreover, they are meant to work outside for a living and to support the family, for instance, fishing, construction, engineering and mechanical jobs etc.; whereas, women are meant to do reproductive tasks and household chores. In addition, performing household tasks is important and time-consuming. As a result, women have limited time to involve in productive or paid work other than an extensional reproductive activity such as preparation of short eats (ADB, 2014).

According to ADB (2014) due to the mind set of allocating 'appropriate gender roles' and the gender division of labor by Maldivian men and women in the process of accessing to resources and opportunities is affected in the following areas:

Employment

It is evident that there is gender disparity in labor force participation rate and unemployment rate, gender differences, including gender income gaps, in employment by industry and gender gaps in government employment.

Economic participation and benefits

Moreover, there is gender gap in possession of fixed and productive assets, limiting women's access to credit and economic choices.

Education

Furthermore, gender gap is obvious in accessing to secondary and tertiary education.

Health

Also, gender discriminatory laws on property ownership, inheritance, marriage, and political leadership, constraints in women's access to health services and gender gap in participation in public office is identified as major issues for gender equality in Maldives (ADB, 2014).

9. Knowledge management

Knowledge Management (KM) is an emerging concept in the field of management and widely adopted in organizations of the developed countries for enhancing organizational performance.

KM is an essential part of research and development activities of a country which involves identifying, capturing, evaluating, retrieving, and sharing all of an enterprise's information assets through an integrated approach. These assets may include databases, documents, policies, procedures, and previously un-captured expertise and experience in individual workers. (Koenig, (2012). KM is a key part of development as it is through application of KM schemes cohesions is achieved leading to further more informed decision making with the use of existing and new knowledge.

Issues related to knowledge management & impacts

While KM is essential for proper developmental initiatives, at present, effective practice of KM among various NGOs/CBOs in Maldives is limited. Another key issue is the fragmented information and knowledge management systems leading to limitations in evidence based decision making. A survey done by Safa, Shakir and Boon (2006) on knowledge management in the Maldives revealed that lack of time for sharing knowledge, inefficient management policies, fear of losing career development / training, lack of awareness and importance of KM, activities that employees have to carry out, lack of management trust and support, the culture of the organization towards KM, lack of reward (such as appreciation), fear of losing knowledge power, no medium to share knowledge, lack of participation, Professionals not willing to share their knowledge, lack of trust, lack of motivation towards the organization, lack of training, and the opinion that knowledge sharing is not part of job were identified and major issues regarding KM.

10. Agro ecology

A study of the Maldivian agricultural industry reveals that less than 3 percent of the GDP accounts for agriculture. Also, when food imported to the country for domestic purposes is compared with home grown food products, imported food products dominate the country's food market by a ratio of 10:1. The Maldivian soil contains sufficient soil and water conditions to support increased agricultural production and also for certain horticultural products.

Agro-ecology involves the principles and practices that are applied in enhancing the resilience and ecological, socio-economic and cultural sustainability of farming systems with the use of basic ecological principles for the design and management of agroecosystems, combining production and conservation of natural resources on the same land units. Compared to typical conventional agriculture which often requires expensive external farm input, application of agro ecology practices can facilitate farmers to manage risks associated with climate change far better. Thus innovative agro-ecological systems result in overall higher productivity while being socially just and economically viable.

Issues and major impacts

Improper management of resources can lead to soil erosion leading to depletion of the already scarce resources. This is much evident on island shorelines and in areas of agricultural activity. Another issue is the unavailability of an agricultural system that is both productive and sustainable. For instance, at present, the majority of agricultural activities in Maldives rely on sunken wells and manual watering for crop irrigation. Furthermore, overuse of soil resources and reliance on external inputs has resulted in reduction in land productivity as well as depletion of soil organic matter and nutrients due to over-cropping with limited crop rotation or fallow periods. Also, though not a serious problem yet, the islands have a potential to be affected by water-logging and build-up of salinity and the low level of organic matter in the soils is conducive for leaching of pesticides and fertilizers into the groundwater. In addition, as a result of increasing population, agricultural and industrial activities, pollution and intrusion of salt water is also an emerging problem.

Marine resources

The climate change-related 2016 mass bleaching in the Maldives indicate that all reefs surveyed were affected by the event. Approximately 60% of all coral colonies assessed and up to 90% in some sites – were bleached. Initiatives such as the coral bleaching survey are encouraged to mitigate the effects of climate change in Maldives.

Addressing issues such as overfishing, destructive fishing and land-based sources of pollution, sand pumping and reducing damage caused due to anchoring are deemed necessary to address in order to minimize the impacts of climate change and bleaching of coral reefs. Collaborative reef restoration and rehabilitation projects are required to address the bleached reefs and hence, improve their status.

An IUCN survey on community knowledge about coral bleaching, revealed lack of knowledge and awareness on the concept at community level. The survey revealed that knowledge is poorer among the females compared to males. The survey that was carried out at Maalhos and Feridhoo, North Ari Atoll mass coral bleaching event revealed that developing a programme to promote environmental stewardship in North Ari Atoll is of utmost importance. These programmes not only increase awareness of communities, but also enhance community ownership of resources and their capacity to implement and enforce management strategies.

Coral reef management strategies such as Ecosystem-based adaptation (EbA) and Resilience-based management (RBM) are identified as approaches to manage the reefs from the impacts of climate change and bleaching. Ecosystem-based adaptation approaches include:

- Restoration of coastal habitats such as mangroves, as a measure against storm-surges, saline intrusion and coastal erosion;
- Establishment and effective management of coastal and marine protected area systems to ensure the continued delivery of ecosystem services that increase resilience to climate change.
- Changes in catchment land use practices, institutional governance, infrastructure development and the need to mainstream risk management within Integrated Water Resources Management (IWRM) to adapt successfully to increased flood and water induced changes.

References

Asian Development Bank (ADB). (2014). Maldives gender equality diagnostics of selected sectors. Retrieved from http://www.finance.gov.mv/v2/uploadedcontent/posts/intpub/Post1385-2014.pdf

Interim Country Partnership Strategy: Maldives, 2014–2015

Koenig, M. E.D., (2012). What is KM? Knowledge Management Explained

Maldives Climate Change Policy Framework (2015)

Maldives Environment Assessment (2007). Asian Development Bank. Strategy and Program Assessment.

Maldives National Energy Policy & Strategy (2010). Ministry of Housing and Environment.

Ministry of Environment and Energy (2014). Republic of Maldives: Preparing Outer Islands for Sustainable Energy Development.

Ministry of Tourism (2015). Assessment of Solid Waste Management Practices and Its Vulnerability to Climate Risks in Maldives Tourism Sector. Tourism Adaptation Project.

Ministry of Tourism, (2015). Assessment of Solid Waste Management Practices and Its Vulnerability to Climate Risks in Maldives Tourism Sector. Online, available at: http://www.tourism.gov.mv/downloads/publicaltions/SolidWaste.pdf

Safa M. S., Shakir F and Boon, O. K., (2006). Knowledge management: Practice and performance of NGO in Maldives

Shakeela, A. (2015). Water Crisis Management in a Tourism Dependent Community. World Academy of Science, Engineering and Technology. International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering Vol:9, No:12, 2015

The NBSAP 2002 and NBSAP 2015 serve as an instrumental policy and planning document for conservation.

UNEP. () Harmful substances and hazardous waste. http://www.unep.org/pdf/brochures/HarmfulSubstances.pdf

United Nations Development Programme, (2011). Comprehensive Study of the Maldivian Civil Society.
http://www.mv.undp.org/content/dam/maldives/docs/Democratic%20Governance/comprehensive%20study%20of%20the%20maldivian%20civil%20society%20(web).pdf

Valuing Biodiversity, (2009) The Economic Case for Biodiversity Conservation in Maldives, Ministry of Housing Transport and Environment, 2009

WHO, (2008) National Occupational Health Profile September. Temporary International Occupational Department. Online, available at : http://www.searo.who.int/maldives/documents/Maldives_Ocupational_Health_Profile_2008.pdf