

Stakeholder Analysis Report

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Atoll Ecosystem Conservation Project

Ministry of Environment,
Energy and Water
B. Atoll, Maldives

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I. EXECUTIVE SUMMARY

1. This stakeholder analysis was undertaken for the project on the conservation and sustainable use of globally significant biological diversity in the Maldives' Baa Atoll. The "Atoll Ecosystem Conservation" (AEC) project is co-financed by the Global Environment Facility (GEF) and implemented through UNDP.

2. The main objective of this stakeholder analysis is to identify key stakeholders as a mechanism to reduce their impacts on biodiversity and to facilitate improvements to biodiversity conservation measures. Many of the required changes will be delivered through communications activities to raise awareness, training to build capacity, and influencing to improve legislation, policies, management guidelines and codes of practice.

3. The methodology adopted for the analysis included reviewing existing project documents, identifying a list of stakeholders and undertaking individual meetings and focus group discussions with the identified stakeholders believed to be impacting the Baa Atoll Ecosystem (BAE). These meetings and discussions were used to identify the stakeholders' roles within the Baa Atoll Ecosystem, benefits and values they receive and identification of both positive and negative impacts to the Baa Atoll ecosystem. Data obtained from these meetings and reviewing of documents led to the listing of interventions against each stakeholder. Those interventions that would facilitate adaptation of their activities to the principles of the CBD ecosystem approach to biodiversity conservation were identified in the form of policy, communication and training interventions.

4. For the purpose of this analysis, twenty seven stakeholders classified within four broad categories were identified and consulted. The broad categories include eleven stakeholders at the national level, three stakeholders at the atoll level, nine stakeholders at the island level and three stakeholders at the international level. From the analysis of these stakeholders, forty two policy interventions, forty one communication interventions and forty two training interventions were identified and listed.

5. The analysis revealed a high disparity of practiced activities linked with the conservation of biodiversity between the inhabited and resort islands.

6. Enforcement of already enacted rules and regulations on the conservation of biodiversity is weak (such as catching sharks, turtles, and protection of birds and sand-mining from the islands and fishing at protected sites still continue).

7. Lack of capable staff located in the atoll to oversee the continuing environmental impacts to the islands and monitoring enforcement of the already enacted regulations on the biodiversity conservation such as managing protected sites and protection of endangered species are also believed to be undermining conservation of atoll biodiversity.

8 Across the Baa atoll islands, there is an urgent need to devise a quick and practical waste management solution.

9. It was also recommended that to facilitate the stakeholders roles in adopting conservation-friendly work practices, there is an urgent need to prepare resource use plans for sectors such as fisheries, agriculture and tourism.

II. Acronyms

AEC	Atoll Ecosystem Conservation
MoFAMR	Ministry of Fisheries, Agriculture and Marine Resources
MRC	Marine Research Centre
MEEW	Ministry of Environment, Energy and Water
MoTCA	Ministry of Tourism and Civil Aviation
EDC	Education Development Centre
MHUD	Ministry of Housing and Urban Development
MATI	Maldives Association of Tourism Industry
UNDP	United Nations Development Program
PMU	Project Monitoring Unit
EIA	Environmental Impact Assessment.
BAE	Baa Atoll Ecosystem
MCPI	Ministry of Construction and Public Infrastructure
MPND	Ministry of Planning and National Development
ERC	Environment Research Center
MRC	Marine Research Center

III. Background to the AEC Project

The Government of the Maldives is currently undertaking a project on the conservation and sustainable use of globally significant biological diversity in the Maldives, using Baa Atoll as a demonstration site (the Atoll Ecosystem Conservation (AEC) project). In the Maldives, atoll ecosystems literally provide the basis for the country's existence as well as life-supporting services such as shoreline protection and goods upon which the economy entirely depends such as fish and tourism. However, social and economic change is altering consumptive behavior and livelihood strategies, outpacing institutional capacity and sectoral programs to adequately manage it. This in turn is threatening the natural endowment that is essential to maintaining the structure and function of atoll ecosystems, the viability of globally significant biological diversity, and the livelihoods and environmental security of the people.

Government initiatives to manage change and mitigate the impacts caused by it are rooted in sector-by-sector approaches, resulting in narrow, sectoral institutions, policies, and interventions. The project's three-pronged strategy is to:

1. Mainstream biodiversity conservation objectives into sectoral policies and programs and reinforce multi-sectoral institutional fora;
2. Conserve biodiversity "in the water" and "on the ground" by establishing protected areas and managing them through innovative national-local and public-private partnerships in Baa Atoll; and
3. Relieve livelihood-related pressure on biodiversity by enhancing reef fishery property rights and enabling local people to pursue more sustainable, alternative livelihoods.

By the end of the project, modified sectoral policies and programs will enable institutions to more effectively manage biodiversity.

IV. Objectives for the study

Biological diversity is often referred to as the variety of life and its processes and includes the variety of living organisms, the communities and ecosystems in which they occur. The three strategies outlined above for the AEC project are used to fulfil the project goal of conservation of globally significant biological diversity in Baa Atoll. Accomplishment of this goal has the potential to impact the livelihoods of many stakeholders both positively and negatively.

The objective of this study therefore is to prepare a comprehensive stakeholder analysis for the AEC project. For the purpose of this study, stakeholders are defined as those organizations (governmental and non-governmental), sectors or groups of individuals which either benefit from or have positive or negative impacts upon the globally significant biodiversity of Baa atoll ecosystems. While the analysis has focused specifically on Baa Atoll (the project demonstration area), it has broad applicability to other Maldivian atolls.

The stakeholder analysis was designed to provide detailed and comprehensive information as follows.

- Stakeholder type
- Benefits received from Atoll biodiversity

- Impacts upon Atoll biodiversity
- Action required to address negative impacts
- Identify whether the action required is Communication, Training or Policy change

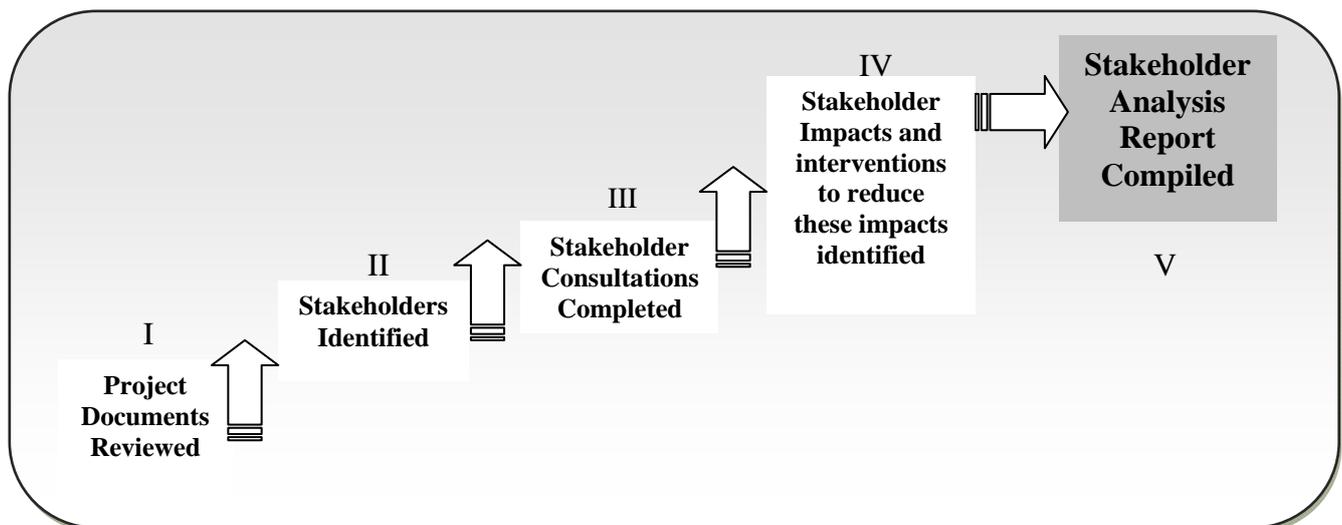
The Stakeholder analysis will be used to prepare a comprehensive Communication and Training plan for the AEC project which will be published as separate reports.

V. Methodology

Stakeholder analysis is a technique used to identify and assess the importance of key people, groups of people, or institutions that may significantly influence the success of an activity or implementation of a project. For the purpose of this study, stakeholders were defined as any group that benefits from or has an impact upon/influences resources in Baa Atoll ecosystems.

In line with this definition, stakeholder analysis for the AEC Project was undertaken to identify and detail the stakeholders impacting the Baa atoll ecosystem with the view to plan to the necessary interventions to reduce these impacts. As indicated in the UNDP's Capacity Development Practice Note, Stakeholder Analysis provides a platform not only to identify impacts of the stakeholders, but also to complement the existing capacity assessment practices.

To complete the stakeholder analysis, the following steps were undertaken



Methodology adopted for the study

- I. To begin the stakeholder analysis, a sound understanding of the activities linked with the AEC project was undertaken. This was done by reviewing existing project documents, its updated log frame and the existing consultants' reports.
- II. With the help of these documents and through communications with the PMU staff, a list of stakeholders was identified.
- III. For the purpose of gathering data, stakeholder consultations were undertaken through stakeholder visits with the key stakeholder groups. For this purpose, stakeholder visits were organized to undertake interviews and focus group discussions as it is believed this method would facilitate collection of a more reliable data set for the study. The visits were made from late November - mid December 2007. These visits provided a

bottom-up approach of data collection and provided a realistic insight into the stakeholder impacts to the Baa atoll ecosystem.

- IV. The gathered data was then analyzed and the findings were reported in the Results section of this Report.
- V. The results of this analysis is presented in a comprehensive report which examines all the aspects related to the identification of the stakeholder benefits, their positive and negative impacts and the required policy, communication and training interventions.

The above methodology helped to develop an effective stakeholder analysis which provided a list of all the stakeholders, their positive and negative impacts to the atoll ecosystem and the possible interventions in the form of policy, communication and training interventions to reduce these impacts.

VI. Results

Data gathered for the study was carefully analyzed and the findings are reported as follows. The findings gathered after the analysis of all the data (relevant documents, face-to-face interviews and focus group discussions) are presented for each stakeholder group having links with the Baa Atoll ecosystem.

1. Stakeholders at National Level

The following table presents the findings of the stakeholder discussions and meetings with the national level stakeholders.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
1	<p><u>Marine Research Centre (MRC)</u> Research that contributes to sustainable development of marine resources, including:</p> <ul style="list-style-type: none"> • Surveys and monitoring of Baa Atoll - reef fisheries, reef corals and other representative components of reef biodiversity and turtle nesting and roosting sites. • Compilation of traditional knowledge on fisheries, reef biodiversity, turtles and seabirds within Baa Atoll, • Develop technical and business expertise for giant clam mariculture (co-funding) and • co-produce coastal and marine resources and uses atlas with ERC 	None	<p><u>Positive</u> MRC undertakes reef monitoring programs, species conservation plans. Plans are also underway to start a pearl cultivation demonstration project in Baa Atoll shortly.</p> <p><u>Negative</u> MRC research activities should have no negative impacts on the Baa Atoll Ecosystem</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Research findings need to be integrated into sectoral and national policies to reduce impacts to the BAE. • All policies and proposals (e.g. aquaculture development) should be subject to SEA and EIA. <p><u>Communication</u></p> <ul style="list-style-type: none"> • Staff do not require any awareness campaigns. <p><u>Training</u></p> <ul style="list-style-type: none"> • Reef Monitoring

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
2	<p><u>Ministry of Planning and National Development (MPND)</u> MPND is mandated with the following responsibilities.</p> <ul style="list-style-type: none"> • Formulating (NDP) • formulate policies on socio-economic development; formulate and implement development consolidation strategies, • appraise, select and prioritize projects, • monitor NDP, PSIP and other developmental activities, • determine and develop standards for socio-economic services and infrastructure required for island populations, undertake necessary social and economic research, formulate policies on spatial distribution of population and identify locations for population and economic centers, produce and update the map of the Maldives and establish and maintain the National Geographic Information System, formulate policies and regulations on national statistics and coordinate statistical data collection operations in the Maldives, conduct population and housing census; compile national accounts; and collect, compile and publish national statistics, formulate national population policies, conduct population research and coordinate population projects. 	None.	<p><u>Positive</u> MPND strives hard to formulate policies and projects to support conservations of atoll and island ecosystems. The current 7th NDP has incorporated activities for adaptation to climate change that includes conservation of ecosystems as one of the top environmental management priorities.</p> <p><u>Negative</u> MPND does not support activities that will negatively impact the local ecosystem. However, some of the projects formulated for development may cause negative impacts to the ecosystem due to human activities.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Support the existing national policies adopted by the MPND for biodiversity conservation <p><u>Communication</u></p> <ul style="list-style-type: none"> • Nil- <p><u>Training</u></p> <ul style="list-style-type: none"> • Nil-

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
3	<p><u>Ministry of Environment, Energy and Water (MEEW)</u></p> <p>MEEW hosts the AEC Project. Plans are underway to</p> <ul style="list-style-type: none"> • review and update mandate of National Commission for the Protection of Environment, • develop and implement ecosystem management (EM) framework and plan for Baa Atoll, • co-produce coastal and marine resources and uses atlas with MRC/MoFAMR and • develop solid waste management capacity, including trial on one selected island (co-funded) 	None.	<p><u>Positive</u></p> <p>MEEW is currently trying to undertake various activities that can contribute positive impacts to the Baa Atoll Ecosystem including compilation of various Baa Atoll Biodiversity linked surveys.</p> <p>MEEW also plan to strengthen Environmental Impact Assessment (EIA) activities in the atolls.</p> <p><u>Negative</u></p> <p>MEEW is new to managing protected sites and thus would affect the ways in which current sites are managed and looked after.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Develop policies to strengthen NCPE • Recommend legal and policy developments for EM • Promote policies to effectively declare more protected areas. • Promote policy development on resource use plans. For tourism and fisheries. • Develop a framework for waste management <p><u>Communication</u></p> <ul style="list-style-type: none"> • Provide international study tours on protected area management. <p><u>Training</u></p> <ul style="list-style-type: none"> • Training of trainers to strengthen the capacity of EIA to deliver trainings and workshops. • Train more staff to widen EIA activities.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
4	<p>Ministry of Fisheries, Agriculture and Marine Resources (MoFAMR) Like other ministries, MoFAMR sets policies and guidelines to ensure sustainable fishing and agricultural activities. The following activities are planned to be implemented with co-operation from the AEC.</p> <ul style="list-style-type: none"> • Apply ecosystem approach to fisheries management • Review and if necessary update mandates of Fisheries Advisory Board to include ecosystem management objectives • Develop a participatory reef resources management strategy and action plan for Baa Atoll • Develop a fisheries enforcement strategy and action plan • Promote community participation in fisheries management • Pilot community-based reef fisheries management in Baa Atoll • Develop reef fishery catch recording program and analytical capability • Host and develop national coral reef monitoring database 	None.	<p>Positive The Ministry is constantly setting policies and guidelines to ensure BDC. There is a major act in the Parliament to further improve such activities. It is a reformed version of the current regulation.</p> <p>Negative Maldives lack appropriate management plans for the fishery resources.</p>	<p>Policy Enact Policies, •to ensure ecosystem approach to fisheries management •update mandates of Fisheries Advisory Board to include ecosystem management objectives •to develop a fisheries enforcement strategy and action plan •to pilot community-based reef fisheries management •fast track the process of tabling proposed Bill to the Parliament attempting to reform the regulation of fishing activities in the Maldives</p> <p>Communication Organize exposure visits on the following: • Sustainable fishing sites/countries. • participatory reef resources management • learn from countries with good fisheries enforcement practices</p> <p>Training • To develop and maintain national coral reef monitoring database</p>

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
5	<p><u>Ministry of Tourism and Civil Aviation (MoTCA)</u> MoTCA is the lead national body for the tourism sector. With the help of the AEC, plans are underway</p> <ul style="list-style-type: none"> • to develop new environmental guidelines for resort island selection, • review and if necessary update the mandates of Tourism Advisory Board to include ecosystem management objectives, • develop tourism component of AEC strategy and plans, • assist development and production of environmental education materials and courses for tourism operators and staff, • participate in atoll-level conservation and resource management planning, 	None.	<p><u>Positive</u> The tourism sector has developed measures to ensure BDC</p> <p><u>Negative</u> Decisions to establish resorts put pressure on the local ecosystem.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Facilitate incorporation on environmental guidelines for resort island selection • Enact a policy to facilitate adoption of a user pay system for establishing conservation fund. • Enact/ implement resource management policies with MoFAMR and other national bodies • Provide a nominated site for refueling, garbage disposal and filling water to safari boats. <p><u>Communication</u></p> <ul style="list-style-type: none"> - Raise awareness of negative impacts and of more sustainable Tourism options. <p><u>Training</u></p> <ul style="list-style-type: none"> • Training of trainers to deliver tourism related environmental education.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
6	<p><u>Maldives Association of Tourism Industry (MATI)</u> MATI acts as a facilitator in communicating concerns of the resorts and other tourism related enterprises and take them to a national level</p>	None.	<p><u>Positive</u> MATI supports the BDC activities of the resorts.</p> <p><u>Negative</u> MATI doesn't pose any particular negative impact to the Baa Atoll ecosystem</p>	<p><u>Policy</u> -None-</p> <p><u>Communication</u> -None-</p> <p><u>Training</u> -None-</p>
7	<p><u>Education Development Centre (EDC)</u> EDC is the national institution responsible for the development of national curriculums and teaching resources for the local schools. With cooperation from the AEC, plans are underway to</p> <ul style="list-style-type: none"> • review environmental and fisheries curricula, • develop additional teaching materials for environmental and fisheries curricula, • adopt the curricula and familiarize teacher trainers with these materials and • pilot the new curricula and teaching materials in Baa Atoll 	None.	<p><u>Positive</u> Although EDC has no direct links to the BAE the subject materials EDC prepare for the Fisheries Science and Environmental Studies are believed to be contributing positively to the BAE.</p> <p><u>Negative</u> EDC poses no threat to the Baa Atoll Ecosystem.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Develop policies to integrate biodiversity conservation measures into the school curriculum <p><u>Communication</u> -None-</p> <p><u>Training</u></p> <ul style="list-style-type: none"> • Train the teacher trainers on the biodiversity related teaching materials. • Train the teacher trainers to undertake conservation projects to school students such as projects on island reef, monitoring island temperature, compiling an inventory of trees in the islands etc.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
8	<p><u>Ministry of Housing and Urban Development (MHUD)</u> MHUD is the national body responsible for the development of Land Use Plans for the Islands. These plans incorporate strategies to ensure conservation of the island ecosystem.</p>	None.	<p><u>Positive</u> Maintain a strong commitment to ensure development of land use plans that will conform to the principles of biodiversity conservation. These plans are generally prepared for 20 yrs</p> <p><u>Negative</u> The work of the MHUD in developing referred plans does not involve any negative impacts. .</p>	<p><u>Policy</u> -None-</p> <p><u>Communication</u> - Raise awareness of negative impacts and of more sustainable urban development options.</p> <p><u>Training</u></p> <ul style="list-style-type: none"> • Train more people to undertake survey training to be located in Baa atoll • Train people to undertake AutoCAD drawing to facilitate quick development of the land use plans.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
9	<p><u>Ministry of Construction and Public Infrastructure (MCPI)</u> Ministry of Construction and Public Infrastructure is the government ministry responsible for the following.</p> <ul style="list-style-type: none"> • Development and regulation of the construction sector of the country. • To oversees the development of public infrastructure of the country such as construction of major harbours and big reclamation projects 	None.	<p><u>Positive</u> As MCPI undertakes construction of infrastructure such as harbours and jetties, these activities facilitate livelihood of the island community.</p> <p><u>Negative</u> Some of these activities of infrastructure construction such as construction of jetties harbours and key walls impact negatively to the local ecosystem.</p>	<p><u>Policy</u> •Support development of policies through studying existing consultant reports that detail negative impacts to the ecosystem due to such construction activities.</p> <p><u>Communication</u> •Raise awareness of negative impacts and of more sustainable construction options.</p> <p><u>Training</u> •Based on the available funds, facilitate capacity development based on the training needs developed by the MCPI</p>

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
10	<p>National NGOs NGOs play a crucial role in development process and are largely localized to islands, with each island having an average of 2. As noted in a recent ADB study among approximately 354 registered NGOs, only 29 demonstrate capacity for carrying out development work.</p>	<p>NGOs do not receive direct benefits from the atoll ecosystem, although some of their members receive benefits.</p>	<p>Positive Some NGOs are engaged in operationalising policy decisions in conservation of ecosystem activities such as garbage disposal, providing awareness on environmental issues, protection of endangered species and cleanup programs and many more.</p> <p>Negative NGOs do not pose negative impacts.</p>	<p>Policy</p> <ul style="list-style-type: none"> • As noted in the National Development Plan, increased dialogue and cooperation between the Government and the private sector. • Invite NGOs as partners in conservation of atoll biodiversity, <p>Communication Organize exposure visits on the following:</p> <ul style="list-style-type: none"> • Country with sustainable fishing activities. • Country with participatory reef resources management sites • Country with good sustainable fisheries enforcement practices <p>Training</p> <ul style="list-style-type: none"> • Training of trainers to deliver ecosystem friendly training programs. • Project Management • Financial Administration • Capacity development for NGOs

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
11	<p>General Public As indicated in the census, 2006, Maldives population is recorded to be 298,968. Statistics also reveal that Maldivian population is increasing steadily and thus impact the local ecosystem. Humans are the cause of most environmental degradation and loss of biodiversity. Expanding settlements alter the landscape, and our increasing appetite for consumer goods degrades the land, the forests, and the seas.</p>	<p>A large proportion of the Maldivian public depends heavily for their livelihood from the local ecosystem.</p>	<p>Positive There is strong desire among the public to safeguarded their ecosystem and protect the endangered species.</p> <p>Negative Research clearly demonstrates that there is a considerable gap between the conceptual appreciation of natural systems and the ability to recognize and respond to threats to biodiversity through changes in lifestyle and participation in the public policy process.</p>	<p>Policy •Based on research, enact practical policy interventions for lifestyle change to facilitate biodiversity conservation</p> <p>Communication •Through NGOs deliver awareness campaigns on the importance of BDC</p> <p>Training •Nil-</p>

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
12	<p><u>Environment Research Centre (ERC)</u> (Ministry of Environment, Energy and Water (MEEW))</p> <p>Environment Research Centre is mandated</p> <ul style="list-style-type: none"> • to undertake research and analysis for the mandatory activities of the MEEW • to establish, manage a knowledge-base and adopt an information dissemination mechanism. 	None.	<p><u>Positive</u> ERC is constantly contributing positively to the local ecosystem. Plans are underway to associate with AEC in conducting surveys of coastal habitats, developments and pollution impacts, conduct and review on-going coastal and terrestrial monitoring programs, prepare conservation action plan for reef coastal biodiversity within Baa Atoll and work with project in developing new environmental guidelines/regulations for coastal modification and apply them during review of coastal modification projects.</p> <p><u>Negative</u> ERC activities do not pose any negative impacts.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Adopt policies such as the recently developed draft waste management framework and other research activities/findings into the national policies. <p><u>Communication</u></p> <ul style="list-style-type: none"> • Fund research activities linked with the conservation of Baa Atoll Ecosystem <p><u>Training</u></p> <ol style="list-style-type: none"> 1. Provide training to undertake EIA monitoring at island/atoll level

2. Stakeholders at Baa Atoll Level

When it came to identify and consult stakeholders at Baa Atoll level, three stakeholders, namely, Atoll Development Committee (ADC) and the Atoll Chief, Atoll Community and the Business Community were identified. Feedback on the Baa atoll ecosystem was discussed with these stakeholders to determine impacts to the conservation of biodiversity at the atoll level and the activities need to be planned for the future.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
1	<p><u>Atoll Chief of Baa Atoll and Atoll Development Committee (ADC)</u> Atoll Chief normally heads administration of the atoll and plays a leadership role to all the development activities including actions in conserving Baa Atoll Ecosystem.</p> <p>ADC consists of members from every island in the atoll and acts as the peak council for all the islands.</p>	<p>Atoll chief normally does not receive benefits from the Atoll Ecosystem.</p> <p>However, ADC receives benefits from the ecosystem indirectly as the members are from the atoll itself.</p>	<p><u>Positive</u></p> <ul style="list-style-type: none"> • The islands are in the process of finalising island development plans that would include an environment component • Plans are also underway to develop Atoll Environment Action Plan for Baa Atoll which will include tasks and deadlines. • Plans are there to establish a Development Cell to oversee development activities including environment related activities. • Plans are also there to provide a waste management island <p><u>Negative</u></p> <ul style="list-style-type: none"> • AEC activities do not pose any negative impacts to the local ecosystem's 	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Facilitate enforcement of existing rules and regulations on catching of sharks and turtles and sand mining from islands. • From stakeholder discussions with safari boat and big tuna boats, introduce policy to reduce damages to the atoll ecosystem. <p><u>Communication</u></p> <ul style="list-style-type: none"> • Awareness program on general biodiversity conservation principles • Exposure trips to protected and well managed sites • Exposure trips to witness enforcement procedures for protected sites and endangered species. <p><u>Training</u></p> <ul style="list-style-type: none"> • Train staff from Development Cell on monitoring EIA activities. • Train staff on applying conservation principles in island development

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
2	<p>Atoll Community The Baa Atoll Community is considered as the overall Baa Atoll Population of approximately 12,132 (5830 females and 6302 males)</p>	<p>The community reaps benefits from the Atoll Ecosystem as their income earning activities and livelihood is directly linked to the BAE.</p> <p>Some of the values they obtain from the local ecosystem include</p> <ul style="list-style-type: none"> • Coastal Protection (Shelter) of which the feature include changing mangrove stocks, increasing reef health, reduction of sand bars due to sand mining and harbor construction. • Storm Protection of which the feature includes reduction of vegetation and changing mangrove stocks due to human settlement, 	<p>Positive A large portion of the Baa Atoll Community expressed strongly in favoring the steps to conserve conservation of Baa Atoll Biodiversity .</p> <p>Negative</p> <ul style="list-style-type: none"> • Lack of awareness on garbage handling • Lack of awareness on the importance of conserving atoll biodiversity • People are unaware of the current rules and regulation enacted to ensure biodiversity conservation such as Consumption of turtles and sharks. • Global warming also impacts negatively due to acts of humans and changes in the way of living. • Waste disposal is also impacting negatively as the volume of waste disposal is steadily growing • Current trends of fish killing is also impacting negatively as many islands in the Baa Atoll have witnessed sudden death of large amount of fish from the surrounding reef 	<p>Policy Enact policies with engagement of stakeholders through workshops and seminars in conserving atoll biodiversity</p> <p>Communication</p> <ul style="list-style-type: none"> • Garbage handling to the various island communities in Baa atoll. • Importance of not catching sharks and turtles and sand mining from islands. • Current rules and regulation to ensure conservation of biodiversity in Baa Atoll • Importance of conserving ecosystem to the atoll community • Campaigns through TV and Radio • Avoiding use of anchor and not walking on reefs • Increased awareness on oil disposal. <p>Training</p> <ul style="list-style-type: none"> • Provide training programs on coastal management and reef protection • Training programs on making composts/fish meals • Training programs on garbage handling and disposable

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
3	<p><u>Atoll-based Business establishments</u> Business establishments in the atoll play a key role in the community's livelihood.</p>	<p>Business establishments at the island level may not get direct benefits from the local ecosystem as these establishments generally sell imported goods.</p>	<p><u>Positive</u> These establishments provide goods and services required by the atoll population for their livelihood.</p> <p><u>Negative</u> Some of their goods and services kept to be sold in the islands/atoll affect negatively to the local ecosystem. E.g. some of these products come with harmful packaging to the local ecosystem</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> •Enact policy to support local business establishments to provide incentives to sell goods friendly to the ecosystem <p><u>Communication</u></p> <ul style="list-style-type: none"> •Undertake consultation with atoll-based business establishments to stock and sell alternative construction materials. <p><u>Training</u></p> <ul style="list-style-type: none"> •To deliver training on the advantages and handling of construction materials.

3. Stakeholders at Island Level

When it came to the island level, the stakeholders were located both within the individual inhabited islands and the resort islands. Findings from these islands obtained from the stakeholder discussions are summarized below.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
1	<p><u>Island Development Committees (IDC)</u> IDCs operate as the lead councils among the island communities in</p> <ul style="list-style-type: none"> • setting island specific policies such as development of Island Development Plans and others • assisting other national bodies such as Ministry of Atoll Development in discharging their duties • operating as advisory body for the Island Chief in undertaking various development and administrative functions • directly involved in income earning activities. 	<p>IDCs do not get direct benefit from the Baa Atoll Ecosystem, but the individual members are directly linked to the income earning activities that exploit the BAE.</p>	<p><u>Positive</u> As the council for operationalising all the national policy decisions and development activities, IDCs contribute positively to the conservation of BAE.</p> <p><u>Negative</u> Lack of awareness among the members on the concepts of biodiversity conservation and lack of knowledge and resources to effectively manage the island biodiversity and protection of endangered species.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Continue assisting IDC and other policy makers in facilitating development of Island Development Plans with applied principles of biodiversity conservation • Facilitate IDC in implementing activities linked with the Plan <p><u>Communication</u> Design and deliver awareness programs on the following.</p> <ul style="list-style-type: none"> • Principles and benefits of biodiversity conservation • Enacted rules and regulations on the protection of endangered species <p><u>Training</u></p> <ul style="list-style-type: none"> • Project Management • Resource Management • Policy Making and Community Engagement

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
2	<p><u>Women Development Committees (WDC)</u> WDC is Women's Lead Council in the Island. WDC's are also involved in all the activities that</p> <ul style="list-style-type: none"> • deal with the planning and execution of programs dedicated to the development of women's affairs in the island • engaged in several income earning activities. 	<p>Similar to IDCs, WDC's do not get direct benefit from the BAE. However, some members as individuals or from the WDCs have links with the BAE.</p>	<p><u>Positive</u> In most of the instances, WDC being as the peak women's body contribute continuously for the health and well being of the island community. In most of the activities these committees engage in, WDC's demonstrate strong commitment in the conservation of island ecosystems.</p> <p><u>Negative</u> WDCs operating within the Baa Atoll pose no direct negative impacts to the BAE. However, due to lack of knowledge and understanding, some of the activities of WDCs may not be aligned with all the principles of biodiversity conservation.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> • Facilitate WDC in aligning its activities to the principles of biodiversity conservation. <p><u>Communication</u> Design and deliver awareness programs on the following.</p> <ul style="list-style-type: none"> • Principles and benefits of biodiversity conservation <p><u>Training</u></p> <ul style="list-style-type: none"> • Garbage handling and appropriate disposal techniques • Women Entrepreneurship Development • Train of Trainers on Handcraft Design and Fabrication using recycled materials

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
3	<p><u>Fisherman (Skipjack and Yellow fin Tuna)</u> A sizeable group of stakeholders are engaged in skipjack and yellow fin tuna fishing activities within the Baa Atoll.</p>	<p>This group obtains direct benefit from the Baa Atoll Ecosystem, as they exploit the local ecosystem for their income. They consume the stock of bait fish and the skipjack and yellow fin tuna.</p> <p>The value of the local ecosystem is a healthy fishery of which the current features and trends include increased tuna fishing, and decreasing bait fish and sea cucumber.</p>	<p><u>Positive</u> They obtain living from the local ecosystem through fishing and thus provide a strong reason to conserve a healthy ecosystem to ensure continued and improved living standard within the atoll.</p> <p><u>Negative</u> As fishing and catching bait fish activities continue, uncontrolled and unmonitored work practices are affecting negatively to the local marine biodiversity.</p>	<p><u>Policy</u></p> <ul style="list-style-type: none"> Facilitate MoFAMR in developing a guideline for fishing and catching the baitfish. <p><u>Communication</u> Design and deliver awareness programs on the following.</p> <ul style="list-style-type: none"> Principles and benefits of marine biodiversity conservation Enacted law/regulations in exploiting the endangered species. <p><u>Training</u></p> <ul style="list-style-type: none"> Sustainable fishing practices Sustainable bait fish catching techniques Fish cooking and drying techniques.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
4	<p>Fisherman (Reef Fish) Reef fishing has always been practiced within Baa Atoll. However, with the opening of resorts, the group of stakeholders engaged in reef fishing has also increased and play a key role in exploiting the local ecosystem.</p>	<p>Information obtained from many of the Baa Atoll islands revealed that reef fishing provides a good income and subsequently supports livelihood of many families.</p> <p>The value of the local ecosystem is a healthy fishery of which the current features and trends include increased reef fishing, and decreasing bait fish.</p>	<p>Positive Like Skipjack and Yellow Fin Tuna fishing, Reef fishing also provides living from the local ecosystem and thus provides a strong reason to conserve a healthy ecosystem to ensure continued and improved living standard within the atoll.</p> <p>Negative Concerns have been raised that the reef stock is being reduced as number of fisherman complained the difficulty they undergo in obtaining a good catch. Several experts also agreed on the negative impacts on the current reef fish stock. They believe that the stock is being affected due to the following.</p> <ul style="list-style-type: none"> • Due to uncontrolled exploitation of reef fish for export and local market • Lack of awareness on appropriate reef fishing techniques such as avoid fishing while they are spawning 	<p>Policy</p> <ul style="list-style-type: none"> • Facilitate MoFAMR in undertaking survey and monitoring in Baa Atoll reef fisheries stock. • Develop reef fishing guideline with community participation and enforce the agreed guideline. • Prepare a management plan with community participation • Develop reef fishery catch recording program and analytical capability <p>Communication Design and deliver awareness programs on the following.</p> <ul style="list-style-type: none"> • Principles and benefits of marine biodiversity conservation • Appropriate reef fishing techniques <p>Training</p> <ul style="list-style-type: none"> • Handling of reef fishery catch recording at island level. • Support research activities to ensure a healthy reef fish stock • Sustainable reef fishing techniques.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
5	<p>Farmers As per the Agriculture Master Plan, over one-quarter of the rural labour force is engaged in agricultural activities. Women in the islands contribute strongly to the current farming activities.</p> <p>Commonly grown crops are as follows.</p> <ul style="list-style-type: none"> • Coconut • Bread fruit • Banana • Root crops such as taro, cassava and sweet potato • Fruits such as mango, papaya, water melon and melon. • Pumpkin • Cucumber • Egg plant 	<p>This group obtains direct benefits from the local land ecosystem as they exploit the island biodiversity for livelihood.</p> <p>The value of the local ecosystem is sustainable farming practices of which the current features and trends include increased home gardening and commercial agricultural activities</p>	<p>Positive Farming activities also provide a reasonable income and thus would help the efforts of biodiversity conservation for continued and improved livelihood.</p> <p>Negative It was noted that some of the farming practiced adopted among the islands to conform to the principles of biodiversity conservation. Some of these include land use, crop selection and plantation, use of fertilizers etc.</p>	<p>Policy</p> <ul style="list-style-type: none"> • Collaborate with MoFAMR is developing a guideline for sustainable farming practices with focus on land use, crop selection and plantation, use of fertilizers <p>Communication Design and deliver awareness programs on the following.</p> <ul style="list-style-type: none"> • Principles and benefits of marine biodiversity conservation • Sustainable farming practices <p>Training</p> <ul style="list-style-type: none"> • Fundamentals of sustainable farming • Effective land use and plantation techniques • Identify common plant diseases and their respective treatments • Types of fertilizers, their use and application techniques.

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
6	<p>Local NGOs Baa atoll has number of NGOs currently operationalising number of policy decisions. Among many NGOs operating within the atoll, a good number are involved in operationalising policies on biodiversity conservation and protection of endangered species.</p>	<p>NGOs do not get direct benefits from the local ecosystem, but individual members are engaged in activities linked to the BAE.</p>	<p>Positive NGOs are positively contributing to the island ecosystem through a number of their activities such as efforts to protect birds and other endangered species, tree plantations, assisting island communities in garbage handling and disposable.</p> <p>Negative NGO activities within the islands do not pose negative impacts to the island/atoll ecosystem. However, lack of funding and resources negatively affect their capacity to reduce many of the negative impacts experienced on the local ecosystem.</p>	<p>Policy</p> <ul style="list-style-type: none"> • Draw up a plan to empower NGOs in operationalising biodiversity conservation policies in Baa Atoll <p>Communication</p> <p>Design and deliver awareness programs on the following.</p> <ul style="list-style-type: none"> • Principles and benefits of marine biodiversity conservation • Areas requiring cooperation of NGOs in implementing biodiversity conservation activities. • Enacted rules and regulations for protecting endangered species and protected sites in Baa Atoll <p>Training</p> <ul style="list-style-type: none"> • Project Management • Financial Administration • Community Engagement in Development • Enforcement techniques for protected sites and species. • Biodiversity conservation management

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
7	<p>Resorts Baa Atoll has five resorts located in the atoll. As per their role, approximately ninety percent of the resort activities are linked with the atoll ecosystem as guests are involved with marine related activities such as</p> <ul style="list-style-type: none"> • snorkeling, • diving, • visiting dive sites, • Island-hopping and many more. 	Baa atoll ecosystem provides major benefits to the resorts, as clients visiting these resorts have a strong desire to stay where flora, fauna, and cultural heritage are less disturbed.	<p>Positive Unlike inhabited islands where people live, resorts have adopted several measures to reduce impacts on their ecosystem. Resorts continue to work on sustaining their ecosystem constantly.</p> <p>Negative Resorts expose the atoll ecosystem to infrastructure development and arriving guests and hence put pressure on the system. In addition to that, resorts consume reef-fish, coconut leaf weaving (fangadu) for resort house roofs and other traditional local products as souvenirs and decorative items. These activities exert pressure on the atoll ecosystem.</p>	<p>Policy</p> <ul style="list-style-type: none"> • Continuous improvement of environmental guidelines and practices • support the recently formed Resort Environment Group <p>Communication Design and deliver awareness programs on the following.</p> <ul style="list-style-type: none"> • Principles and benefits of marine biodiversity conservation <p>Training</p>

No	Name and role of the Stakeholder	Benefits received from Atoll Biodiversity	Impacts upon Atoll Biodiversity	Actions required to address negative impacts
8	<p>Island Communities Baa Atoll has 13 inhabited islands and the income earning activities vary from island to island differing the targeted activities linked with the conservation of biodiversity from island to island.</p>	<p>Communities in all the 13 islands benefit from the BAE through their livelihood.</p> <p>The value of the local ecosystem includes the following.</p> <ul style="list-style-type: none"> • Good habits of which current features and trends include recovering diverse coral reef, reducing stock of mangroves, plants and trees due to the expansion of human settlement. • Species of which include declining frigate birds, colonial sea birds, protected birds, dolphins, whale sharks, sharks and increasing turtles. • Other species include declining medicine plants, birds and insects. 	<p>Positive Baa atoll is their home and the island communities are committed to adopting measures to ensure conservation of biodiversity.</p> <p>Negative As population increases in the islands, pressure is exerted on land and sea. As more land is consumed for settlement, island biodiversity is negatively impacted thus exerting pressure on the island ecosystem.</p> <p>In addition, fresh water lens is polluted due to septic tanks, hazardous waste, crude oil and other chemicals disposal.</p> <p>Island communities are also impacted with coastal erosion due to sand mining, coral mining, dredging and climate change.</p> <p>Other negative impacts include cutting down of trees and coconut palms due to expanding housing, building of boats and agriculture.</p>	<p>Policy</p> <ul style="list-style-type: none"> • Initiate a mechanism to revive tree plantation within the island communities. • Strengthen the process EIA when island communities engage in harbour making and reclamation of land. <p>Communication</p> <ul style="list-style-type: none"> • Educating the community on the adverse effects that will result in over exploitation of the local ecosystem • Awareness campaign to stop catching of sharks • Awareness program on the benefits of enforcing of existing rules on Birds and turtles protections. • Awareness programs on the effects of sand mining <p>Training</p> <ul style="list-style-type: none"> • Training on garbage handling and disposable techniques.

VII. Conclusions and Recommendations

Based on the findings of the Stakeholder Analysis, the following conclusions and recommendations are made.

1. Set up an effective mechanism to enforce the existing rules and regulations supporting conservation of biodiversity

There is a strong realization that the anticipated awareness and training programs cannot alone deliver the expected outcomes as the current mechanisms to enforce the rules and regulations are poor. Therefore a new and fresh thinking is needed to devise a plan to ensure the conservation rules and regulations are appropriately enforced. One way of doing this could be by empowering the existing NGOs or through “Partnership Groups” as ecosystem neighborhood watchers. AEC can undertake further consultations with the stakeholders in collecting their views on either selecting NGOs or formulation of Partnership Groups. AEC can also facilitate their empowerment to increase the capacity within the Baa Atoll in undertaking environment enforcement activities.

2. Design, develop and deliver relevant awareness programs and communication campaigns through an effective Communication Plan

The findings from this Stakeholder Analysis will be used to design and develop a Communication Plan that will detail activities for raising awareness, communication campaigns and detailed strategies for implementing these activities. The communication activities would be planned in such a way to ensure smooth implementation of the AEC Baa Atoll Project activities. At the same time, the planned awareness programs will be delivered in close cooperation with all the stakeholders and sectors.

3. Based on the interventions required, develop a Training Plan and start delivering training

Based on the findings from the Stakeholder Analysis Report, a Training Plan (TP) is prepared for three years. The TP would include the title of the programs, their priorities, and the delivery modes. The proposed training interventions would strive to expand the technical capacity within the Baa Atoll to facilitate activities supporting conservation of biodiversity in Baa atoll.

4. Recruit and place an “Environment Officer” as an MEEW Staff and post in Baa Atoll

For the purpose of sustainability, consult with MEEW to place an Environmental Officer in Baa Atoll who would work as the focal point for environment related activities in the atoll. He/she would oversee all the environment related activities such as conservation of biodiversity, implementation of EIA and other activities. AEC can fund training of such a person.

5. Facilitate the Baa Atoll Office in negotiating with relevant stakeholders in placing various resource personnel within the anticipated “Baa Atoll Development Program”

It was noted that many of the development activities including conservation of biodiversity are delayed due to lack of resource personnel within the atoll. AEC can

assist Baa Atoll Office in training young people to become experts in various such fields and to work in the atoll. If possible the best would be to offer permanent positions to ensure sustainability of the AEC project. Atoll youth can be trained to become experts within the atoll as fisheries, agriculture, surveying, AutoCAD and project management experts.

6. Support development of a “Baa Atoll Stakeholder Forum”

During the stakeholder discussions, it was observed that stakeholders in Baa atoll need to be integrated well in implementing the AEC Baa Atoll Project activities to avoid miscommunication and misunderstanding. Such a process can slowly increase trust among the stakeholders and collective decisions can be made in issue relating to the conservation of biodiversity. This proposed forum needs to include representatives from island communities and resorts to effectively implement the conservation activities and work beyond to tackle many other issues.



VIII. List of the Stakeholders

No	Name of the Stakeholder	Representing Group
1	Mohamed Mahir	Atoll Chief
2	Usmaan Ali	Thulhaadhoo
3	Abdhuraheem Yusuf	Thulhaadhoo
4	Ahmed Mohamed	Thulhaadhoo
5	Ahmed Rasheed	Thulhaadhoo
6	Hussein Afeeh	Thulhaadhoo
7	Faaizaa	Thulhaadhoo
8	Ilyas Ibrahim	Goidhoo
9	Abdurraheem Zakariyya	Goidhoo
10	Sofeenaaz	Goidhoo
11	Mariyam Naazly	Goidhoo
12	Fathimath Sheereena	Goidhoo
13	Sameer Ahmed	Goidhoo
14	Milhana Naseer	Goidhoo
15	Abdul Raheem Ahmed	Goidhoo
16	Abdulla Yaasir	Kudarikilu
17	Hassan Mohamed Manik	Kudarikilu
18	Ahmed Firas	Kudarikilu
19	Ahmed Askan	Kudarikilu
20	Asif Moosa	Kudarikilu
21	Abdul Sattar Mohamed Manik	Kudarikilu
22	Mohamed Ali	Kudarikilu
23	Ahmed Naeem	Kudarikilu
24	Zuhaira Ali	Kudarikilu
25	Aabidha Ali	Kudarikilu
26	Razeena	Kudarikilu
27	Niuma Ahmed	Eydhafushi
28	Zaakiru Hussein	Eydhafushi
29	Abdul Azeezu Aboobakuru	Eydhafushi
30	Naazila Mohamed	Eydhafushi
31	Athifa Ahmed	Eydhafushi
32	Javaaza Mohamed	Eydhafushi
33	Fathimath Shareefa	Eydhafushi
34	Aaaidha Umar	Eydhafushi
35	Aishath Mohamed	Eydhafushi
36	Zakiyya Ahmed	Eydhafushi
37	Aishath Reetha	Eydhafushi
38	Shamoon Mohamed	Eydhafushi
39	Fathimath Zoona	Maalhos
40	Yusuf Abdhurahman	Maalhos
41	Yusuf Aboobakur	Maalhos
42	Salih Ibrahim	Maalhos
43	Mohamed Abdhullah	Maalhos
44	Naahidha Aboobakuru	Maalhos
45	Haajaraa Yusuf	Maalhos
46	Sameera Ibrahim	Maalhos
47	Haleema Abdhullah	Maalhos
48	Aneesa Nizaaru	Maalhos

49	Aiminath Baseera	Maalhos
50	Abdulazeez Yusuf	Maalhos
51	Varudha Hussein	Maalhos
52	Dr.Mohamed Shiham Adam	MRC
53	Mr. Mohamed Zuahir	MEEW
54	Dr.Abdulla Naseer	MoFAMR
55	Mr. Zuhurulla	MHUD
56	Mr. Abdulla Naushad	MCPI
57	Dr. Shareef	MPND
58	Mr. Sim I Mohamed	MATI
59	Ms. Rochelle Kilgariff	Sonevafushi Resort
60	Anke Hofmeister	Sonevafushi Resort
61	Ahmed Irash	Sonevafushi Resort
62	Mario Stanic	Coco Palm Resort
63	Pascal Wijnen	Coco Palm Resort
64	Ahmed Mahatheer	Coco Palm Resort
65	Muaviyath Umar	Royal Island Resort
66	Ms. Junk Mima	Royal Island Resort
67	Abdulla Rasheed	Royal Island Resort
68	Mohamed Rashad	Royal Island Resort
69	Peter Gremes	Reethi Beach Resort
70	Mohamed A Hakeem	Reethi Beach Resort
71	Matt	Reethi Beach Resort
72	Ms. Aishath Ali	MoTCA
73	Naushad	MCPI

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Meeting Notes with Stakeholders

No	Name of the Stakeholder	Details of the Meeting Notes
1	Ministry of Environment, Energy and Water	A meeting was held at the MEEW on 18 th November, 2007. During the meeting it was noted that MEEW is currently overseeing the implementation of the AEC Baa Atoll Project. In addition to that, MEEW has declared and managing the protected sites and include two vey important sites in Baa Atoll; namely Dhigalihaa and Olhugiri. MEEW is also supporting environmental NGOs including NGOs in Baa Atoll. MEEW is also responsible is managing the EIA nationally.
2	Baa Atoll Chief And Atoll Development Committee (ADC)	Atoll Chief is the highest-ranking state functionary in the atoll and oversees the administration of all the islands in the atoll and plays a leadership role to all the development activities including actions to conserve Baa Atoll ecosystem. A meeting was held at the Atoll Office on 27 th November, 2007 to assess biodiversity conservation activities in Baa Atoll.
3	Education Development Centre (Minist. of Education)	A meeting was held at EDC on 19 th November 2007. During the meeting it was noted that EDC has the mandate to prepare all the curriculum materials for the Maldivian schools. Although EDC has no direct links to the BEC, the subject materials EDC prepare for the Fisheries Science and Environmental Studies are believed to be contributing positively to the BEC.
4	Ministry of Housing and Urban Development (MHUD)	A meeting was held at the MHUD on 28 th November, 2007 and was attended by a senior official. It was learnt that MHUD is responsible for the development of land use plans and maintain a strong commitment to ensure that these plans will conform to the principles of biodiversity conservation. These plans are generally prepared for 20 yrs
5	Ministry of Tourism and Civil Aviation	MoTCA is the peak national body to set policies and manage tourism activities in the Maldives. A meeting with a senior official of the Ministry was held to determine its contribution and impacts to the local ecosystem
6	Ministry of Planning and National Development (MPND)	MPND is the peak national body and sets all the policies for national development. A meeting was held at the MPND premise and was attended by a senior official. The meeting was focused on determining MPND's contribution and impacts to the local ecosystem
7	Ministry of Fisheries, Agriculture and Marine Resources	It is the peak national body to set policies and manage both fishing and agricultural resources and activities. The Ministry is constantly setting policies and guidelines to ensure BDC. There is a major act in the Parliament to further improve such activities and is a reformed version of the current regulation. A meeting

		with a senior official of the Ministry was held to determine its contribution and impacts to the local ecosystem
8	Marine Research Centre (MRC)	A meeting was held at the MRC office on 18 th November, 2007. During the meeting, it was noted that MRC has no direct link with the Baa Atoll Ecosystem (BAE). However, MRC is currently engaged in various marine related researches nationally and plans to start a pearl cultivation demonstration project in Baa Atoll soon. The meeting was focused on identifying the possible positive and negative impacts to the Baa Atoll ecosystem.
9	Royal Island Resort and Spa	A meeting was held at the resort on 25 th November, 2007 and was attended by the General Manager and all the Dive School Staff. It is one of the five resorts located in Baa Atoll and has both direct and indirect links with the Baa Atoll biodiversity. It is believed that 90 percent of the resort activities are linked with the Baa Atoll Ecosystem as guests are involved with marine related activities including snorkelling, diving, visiting dive sites etc. Royal island is a member of the recent Baa Atoll Resort initiated <u>Environment Program</u> that involves regular meetings of the resort staff to discuss and tackle environmental issues.
10	Baa Atoll Thulhaadhoo	A meeting was held at Thulhaadhoo on 25 th November, 2007 and was attended by the Island Chief, Magistrate, IDC and WDC members and NGO officials. Thulhaadhoo has a large population of about 2500 people and their main occupation include fishing and handicraft activities. During the meeting it was noted that Baa Thulhaadhoo population has direct links with the BAE and there is a strong desire to adopt stronger biodiversity conservation measures. The meeting was used to identify their positive and negative impacts to the local ecosystem.
11	Baa Atoll Goidhoo	At Goidhoo, a meeting was held on 25 th November, 2007 and the meeting was attended by Island Chief, Magistrate, IDC and WDC members and NGO officials. Goidhoo is also comparatively big island with a population of approximately 700 people. Links of the Goidhoo people to BAE is also noted in relation to their income earning activities as their main income earning activities include fishing, agriculture and weaving coconut leaf (fangiviyun).
12	Coco Palm Resort	Like other resorts, Coco Palm also has strong links with the Baa Atoll Ecosystem as tourists arriving to the resort spend several hours engaged with the marine related activities. A meeting was held at the resort on 26 th November, 2007. During the meeting it was noted that the resort is committed and participate in several biodiversity conservation activities. The meeting was attended by the General Manager and the Dive School and Human Resources Department Staff.
13	Sonevafushi Resort	Sonevafushi is very popular as an eco friendly resort in the Maldives and have undertaken several initiatives in

		supporting the Baa Atoll Ecosystem. Like other resorts, guests arriving Sonevafushi also uses its ecosystem as their main holiday activities. A meeting was held at the resort on 26 th November, 2007 and was attended by the General Manager, Human Resources Department Staff and the Marine Biologist residing in the resort.
14	Baa Atoll Maalhos	Maalhos is an inhabited island with a population of approximately 559 people. A meeting was held at Maalhos on 26 th November, 2007 and was attended by Island Chief, Magistrate, IDC and WDC members and NGO officials Their income earning activities are directly and indirectly linked with the Atoll Ecosystem. Their main occupation includes paid employment at nearby resorts. It was also noted that a large group of women in Maalhos is engaged in fangiviyun and sataa viyun.
15	Baa Eydhafushi Atoll	Eydhafushi is the Atoll Capital and their main livelihood activities include fishing and paid employment. A meeting was held at Baa Eydhafushi on 27 th November, 2007 and was attended by the Island Chief, Magistrate, IDC and WDC members and NGO officials. The meeting facilitated identification of the activities impacting to the local ecosystem.
16	Reethi Beach Resort	As like other resorts, Reethi Beach Resort has strong links with the atoll ecosystem as resort clients spends significant amount of time having links with the atoll ecosystem. A meeting was held at Baa Atoll with General Manager, Maintenance Manager and the Base Leader for the Dive School. The meeting facilitated identification of the resort contribution and impacts to the local ecosystem.
17	Baa Kudarikilu Atoll	A meeting was held at Baa Atoll Kudarikilu on 26 th November, 2007 Island Chief, Magistrate, IDC and WDC members and NGO officials. The meeting focused on identification of the income earning activities of the island, followed by determining identification of the island community's contribution and impacts to the local ecosystem.
18	Safari Boats Operating in Baa Atoll	A meeting was held with a safari boat owner The meeting facilitated identification of the resort contribution and impacts to the local ecosystem.
19	Maldives Association of Tourism Industry (MATI)	MATI acts as a facilitator in communicating concerns of the resorts and other tourism related establishments and take them to a national level. A meeting was held with officials of the MATI to determine its contribution and impacts to the local ecosystem.

Appendix-B

Table on Values of Baa Atoll ecosystems (December 2007 Workshop)

Group A. Values

Values	Features	Trend	Comment
Coastal Protection (Shelter)	Mangroves	↑ ↓	<ul style="list-style-type: none"> - Increase in some islands - Decline in some populated islands - EP2 may be effective - Re-planting trees
	Reef	↑	<ul style="list-style-type: none"> - Growth seen after 1998 bleaching - Sedimentation cause herm effect
	Sand bars	↓	<ul style="list-style-type: none"> - Harbour construction - Sand mining
Storm Protection	Vegetation	↓	<ul style="list-style-type: none"> - Due to human settlement
	Mangroves	↑ ↓	<ul style="list-style-type: none"> - Increase in some islands - Decline in some populated islands - EP2 may be effective - Re-planting trees
Fishery	Tuna fishing	↑	<ul style="list-style-type: none"> - Increase in boat size / speed - Changing blue / yellow - Lighting bait fishery is destructive
	Reef fish	↑	<ul style="list-style-type: none"> - In some islands increase in fish catch + changing type of fishery
	Bait fish	↓	<ul style="list-style-type: none"> - Not enough for larger vessels - Changing type of catching
	Sea cucumber	↓	<ul style="list-style-type: none"> - Now requires deep diving + resource depleted + prohibited
Tourism	Resorts	↓	<ul style="list-style-type: none"> - Diving / Maldives experience - Hospitality / peace / clean environment
	Safari	↑	<ul style="list-style-type: none"> - Crystal clear water / scenery / dolphin

	Recreation for local people	No change	Local people does not have access to any recreational facilities of the resorts and also no demand for such facilities in the islands from tourists
	Handicraft	↑	- High demand for local handicraft products by tourists
Biodiversity Support	Agriculture	↑	- Home gardening - Commercial agriculture in some islands (Goidhoo)
Habitats	Diverse coral reef	↑	- Recovering after bleaching
	Mangroves (Goidhoo / Olhugiri)	↑	- Olhugiri huge regeneration - Goidhoo human pressure
	Plants / trees (eg: Marugas)	↑	- Depending on the island
Species	Frigate birds (Olhugiri)	↓	- Needs detailed assessment
	Colonial sea birds	↓	- Disturbance to sand banks
	Protected birds (other)	↓	- Needs detailed assessment
	Dolphins	↓	- 15-20 miles range - Important for tuna fishery
	Whale shark	→	- 2-3 sightings daily
	Sharks	↓	- Westerly monsoon - Export shark products / pressure
	Turtles	↑	- Ban is not effective - Regulation not implemented
Other species	Medicinal plants	↓	- People are not aware of use / medicinal value - Traditional medicine being replaced with modern medical treatments (quick results)
	Birds	↓	- Use of sand banks for tourism - Catching birds / recreation - Loss of habitats

	Insects	↓	<ul style="list-style-type: none"> - Using pests / insecticides - Loss of habitat - Less trees
Aesthetic value	Natural beauty	↓	<ul style="list-style-type: none"> - Some islands unchanged - Artificial changes

The workshop also identified a range of Threats to atoll ecosystems. Some of these arose within the atoll itself (eg pollution and disturbance), while others came from outside (climate change and sea level rise). Of great concern was that the majority of the threats had increased seriously over the last 10 years.



Table on Threats to Baa Atoll Ecosystem

Group B Threats

Threat	Features	Trend	Comments
Pollution of the fresh water lens	Septic tanks	↑	Increase in population
	Hazardous waste(chemicals)		Development
	Crude Oil (Kalhu theyo)		No alternative for disposal
	Use of pesticides		
Coastal erosion (rah Girun)	Sand mining	↑	Damages to housing
	Coral mining	→	Damages to people and household goods
	dredging	→	Increase in cost of maintenance
Climate change	Changes in weather pattern	↑	Swell surges
	Sea level rise	↑	Loss of islands, erosion
Cutting down of trees and coconut palms	housing	↑	
	Building of boats	↑	
	agriculture	↑	
Waste disposal/management	Village waste	↑	Increase in peoples need
	Resort waste		No. of resorts has increased
	Safari boat waste		No bunker facilities in the atoll for safaris and boats