

Results of preliminary scoping of environmental and social considerations

(1) Environmental and social considerations in Republic of Maldives (The Maldives) -
Legal framework and practice

① Environmental administration

The Maldives has two administrative bodies concerning environment, i.e. Ministry of Environment and Energy and Environmental Protection Agency (EPA). Of which, EPA is responsible for the country's environmental administration. In addition, EPA works under the supervision of Minister of Environment and Energy, but is an entity that is independent from Ministry of Environment and Energy and is under the direct control of the president. Environmental impact assessment procedures are conducted through EPA.

② The legal and regulatory framework for environmental protection

The country has several environmental laws and regulations in place, including the Environment Protection and Preservation Act that provides guidelines on environmental protection in the country and the Environmental Impact Assessment Regulation that specifies procedures for implementing environmental and social considerations into projects/assessment and terms of reference (TOR) that provides detailed rules and regulations required for environmental impact assessment for projects, such as the development of fish processing plants and harbors.

Note that the Environment Protection and Preservation Act and the Environmental Impact Assessment Regulation were revised in 2013, and they are published only in the national language of the Maldives, Divehi, and are not published in English. Although only the 2007 English versions of the above-mentioned Act and Regulation are available to us, we believe that no major changes that may affect our project have been made to the articles in the revised Act and regulation. The Environment Protection and Preservation Act stipulates the followings:

- Environmental protection and conservation
- Protected areas and natural reserves
- Environmental Impact Assessment (EIA)
- The termination of projects that have any undesirable impact on the environment
- Waste disposal, oil and poisonous substances
- Hazardous/toxic or nuclear wastes
- The penalty for breaking the law and damaging the environment

③ Marine protected areas

Marine protected areas identified under the Environment Protection and Preservation Act now counts 32 in number and have been declared as such in a stepwise manner from 1995 to 2009 (Figure 3-3). These marine protected areas have area-specific protected species, banned activities and purposes. In addition, Tourism Act 2/99 and Regulation on the Protection and Conservation of Environment in the Tourism Industry, 2006 prohibit fishing on reefs of remote islands leased as tourist resorts.



Figure 1 Marine protected areas identified under the environment Protection and Preservation Act

Source: The homepage of Mondomaldive.com (2011)

④ Environmental Impact Assessment (EIA) and Initial Environmental Evaluation (IEE)

Environmental Impact Assessment Regulation specifies procedures for implementing

environmental and social considerations and approving the projects. The flow chart below outlines the procedures.

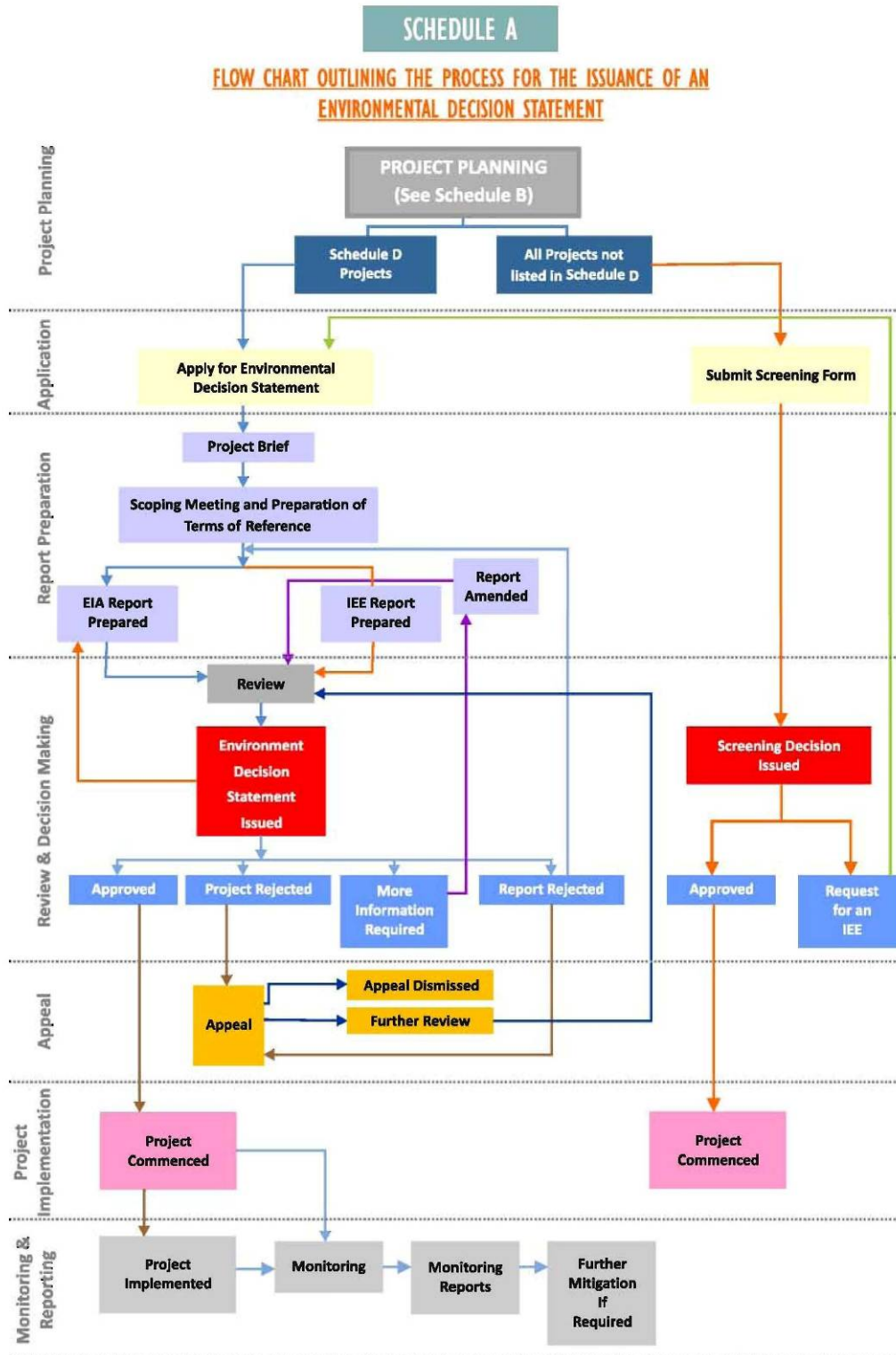


Figure 2 Environmental and social considerations regarding the project implementation

Source : Environmental Impact Assessment Regulation, 2007

In addition, TOR for Environmental Impact Assessment for the projects related to the fisheries sector includes the followings:

- Fish Processing Project (Development of fish processing facilities)
- Aquaculture/ Mariculture Project (Fish farming)
- Harbor Project (Development of harbors)
- Sewerage System Project (Development of sewage treatment facilities)
- Waste Management Project (Waste treatment facilities)

Note that EIA and IEE are only required for projects that involve large scale developments and are not required for small scale projects, such as domestic fish processing plants in remote islands.

(2) Preliminary scoping

① Results of preliminary scoping

The project timeframe is as follows: Start of the project to Year 1: conduct basic research to identify and analyze issues surrounding the development of the fisheries sector, prepare a master plan and plan pilot projects based on the findings, Year 2 to Year 3: Implement pilot projects and give feedback to the master plan. Environmental and social impacts need to be examined when the pilot projects are put into practice, and content of the impacts will be specified in Year 1. Accordingly, here we conducted a preliminary scoping study for possible pilot project ideas, which were prepared based on the findings through detailed planning survey. The possible pilot projects are as mentioned below.

- Pilot project for improving mortality rates of bait fish for skipjack pole and line fishing
- Pilot project for improving domestic fish processing industry
- Pilot project for improving on-board handling of tunas
- Pilot project for developing a coastal fishery-related statistical data collection system

On assumption that the above-mentioned possible pilot projects are put into action and in accordance with the JICA Guidelines for Environmental and Social Considerations (2010), a preliminary scoping and the results are shown in Table 1.

Table 1 Results of preliminary scoping

No.	Item	Rating	Reasons
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Pollution control	1	Water pollution	C	The suggested fish processing operations may cause water pollution, allowing the fish processing wastes to flow into the sea during the pilot project. We need to check the amount of polluted water and treatment methods to ensure that the polluted water is treated in accordance with the country's laws and regulations. However, since the existing facilities are used in the pilot project, we also need to confirm whether the existing facilities have the capacity to treat the polluted water properly.
	2	Wastes	C	The suggested fish processing operations produce wastes. We need to check the amount of wastes and treatment methods to ensure that the wastes are treated in accordance with the country's laws and regulations. However, since the existing facilities are used in the pilot project, we also need to confirm whether or not the conventional treatment methods are appropriate.
	3	Noise/vibration	D	No noise and vibration is expected during construction and project activities.
	4	Offensive odors	D	The suggested fish processing operations may cause offensive odors during the pilot project. However, since the existing fish processing facilities are used and none of our project activities is expected to cause serious offensive odors, little adverse impact is expected.
	5	Bottom sediment	D	On the assumption that the above-mentioned polluted water and wastes are treated properly, no

				adverse impact on the sediments near fish-processing facilities is expected.
Natural environment	6	Protected area	D	There are concerns over illegal fishing, such as catching reef fish, in the marine protected areas. Since the objective of the coastal fishery-related pilot project is to promote fishery management through support for administrators and fishermen, the pilot project will contribute to the protection of marine resources.
	7	Ecosystem	D	There are concerns over overfishing on the reefs, leading to fewer reef fish and adversely impacting the ecosystem. The coastal fishery-related pilot project aims at reducing the negative impacts on the ecosystem by promoting fishery management. In addition, the offshore fishery-related pilot project helps prevent further increases in coastal fishing effort through offshore fishery management and helps reduce adverse impacts on the coastal ecosystem. Through these activities, we ensure the sustainable use of marine resources and help preserve marine and coastal ecosystems.
	8	Hydrology	D	No activity is expected that may cause any negative hydrologic impacts in the sea.
	9	Geographical features/ geological features	D	No activity is expected that may cause any adverse impacts on geographical and geological features of the land and sea.
	10	Ground water	D	The suggested fish processing operations may increase water use during the pilot project. However, since rain water rather than ground

				water is currently used for fish processing, no adverse impact on ground water is expected. Furthermore, on the assumption that effluent discharges and wastes are treated properly, no ground water pollution is expected.
Social environment	11	Resettlement	D	No construction and pilot project that require resettlement are expected.
	12	The poor	D	Since the project aims to embody the sustainable use of marine resources and improving the livelihood of fishermen, no adverse impact on the poor is expected.
	13	Ethnic minorities and indigenous peoples	D	It is confirmed that no ethnic minorities and indigenous peoples reside in the project areas.
	14	Land use and local resources	D	Since the existing facilities and land are used in the project, no major change in land use is expected. In addition, the project aims at embodying the sustainable use of local resources (marine resources).
	15	Water use	D	Since little groundwater is used in the pilot project, as mentioned above, and on the assumption that polluted water and wastes are treated properly, no impact on water use is expected.
	16	Existing social infrastructure and services	D	No construction and pilot project are expected that may impact the existing social infrastructure and social services.
	17	Social institutions such as social infrastructure and local decision-making institutions	C	No construction and pilot project are expected that may impact social institutions such as social infrastructure and local decision-making institutions. Note that in implementing the pilot project, we need to seek mutual understanding and build

				consensus, actively cooperating with local decision-making institutions including traditional ones.
18	Uneven distribution of benefits and burdens	C		In planning the pilot projects, efforts should be made to establish and maintain mutual understanding and consensus among fishermen/villages and also to avoid uneven distribution of benefits and burdens and/or prevent conflicts among them.
19	Conflicts among the local communities	C		In planning the pilot project, efforts should be made to establish and maintain mutual understanding and consensus among fishermen/villages and also to prevent conflicts and troubles among them.
20	Cultural heritage	D		It is confirmed that there is no cultural heritage in the areas where the pilot project is to be conducted.
21	Landscape	D		No construction and pilot project that may cause adverse impact on landscape are expected.
22	Gender	C		In planning the pilot projects, gender considerations need to be integrated into the projects. Especially, since female workers are expected to be mainly responsible for fish processing operations at a domestic fish processing plant, efforts should be made to promote their active participation in project activities.
23	Children's rights	D		No project activity that may hinder children's rights is expected.
24	Infectious diseases such as HIV/AIDS	D		No project activity that may cause infectious diseases to spread is expected.
25	Labor environment/safety	B		In the offshore fishery-related pilot project, the introduction of new fishing tackles and fishing methods

				to keep fish caught fresh is expected. In planning the pilot project, considerations should be given to ensure safety on a fishing boat.
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A : Serious adverse impact is expected.

B : Minor to moderate adverse impact is expected.

C : The extent of impact is currently unknown.

D : No impact is expected.

② Examination of an alternative plan

As an alternative plan, we considered what would happen if the project is not conducted. However, since the main purpose of the project is to prepare a master plan, we concluded that the project is expected to have a very limited adverse impact on the environment and society. In addition, through the implementation of the pilot projects, we aim to promote the effective use of marine resources and establish basic data collection system for marine resource management. Therefore, the project is expected to have no adverse impact on environment. On the contrary, the project will contribute to preservation and conservation of the environment. Furthermore, in our efforts to help improve domestic fish processing operations, we plan to use the existing fish processing plants without building new facilities. Accordingly, the project is highly unlikely to drastically increase polluted water and fish processing wastes from the current levels.

(3) Ideas for TOR for Environmental Impact Assessment

① Water pollution (C)

We need to confirm that polluted water and fish processing wastes from fish processing operations will not cause material adverse impact on the quality of the sea water and groundwater. Where water pollution from the implementation of the project is observed, we will estimate the extent of the impact on environment and prepare a monitoring plan for water pollution according to need.

② Wastes (C)

Since the pilot project is expected to produce fish processing wastes, we need to check the amount of the wastes and waste treatment method to ensure that the wastes are treated in compliance with the Maldives' laws and regulations.

③ Social institutions such as social infrastructure and local decision-making institutions

(C)

No construction and pilot project are expected that may impact social institutions such as social infrastructure and local decision-making institutions. Nevertheless, in implementing the pilot projects, we need to seek mutual understanding and build consensus, actively cooperating with local decision-making institutions including traditional ones.

④ Uneven distribution of benefits and burdens (C)

In planning the pilot projects, efforts should be made to establish and maintain mutual understanding and consensus among fishermen/ and also to avoid uneven distribution of benefits and burdens and prevent conflicts among interest parties.

⑤ Conflicts among the local communities(C)

In planning the pilot projects, efforts should be made to establish and maintain mutual understanding and consensus among fishermen/villages and also to prevent conflicts and troubles in the locality.

⑥ Gender (C)

In planning the pilot projects, gender considerations need to be integrated into the projects. Especially, since female workers are expected to be mainly responsible for fish processing operations at a domestic fish processing plant, efforts should be made to promote their active participation in project activities.

⑦ Labor environment/safety (B)

In the offshore fishery-related pilot project, the introduction of new fishing tackles and fishing methods to keep fish caught fresh is expected. In planning the pilot project, considerations should be given to ensure safety on a fishing boat.