

Additional information

For the proposed solid waste management facility at Thilafushi, Kaafu Atoll, Maldives

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INTRODUCTION

This document provides the responses by the consultant to the additional information and queries made by the Environmental Protection Agency (EPA) following the review of the Environmental Impact Assessment report for the proposed solid waste management facility at Thilafushi, Kaafu Atoll, Maldives.

RESPONSES

1. Identify locations for temporary accommodation and temporary set up

Temporary accommodation and set up are as follow:

- Make-shift office facility will be set-up on the south-west portion of the plot allocated for regional waste management facility at Thilafushi Island. It is proposed to use a container properly modified to serve as office space.
- Shed/bachelors accommodation facility in Thilafushi will be rented to accommodate the labour force. Basic facilities: water, electricity and sanitation will be provided.
- Managerial staff will be accommodated at Hulhumale' and Male'.
- Few workers and supervisors will be accommodated in rental facilities in Male' (to attend to any emergencies during waste collection works)

2. Length of coastal protection for each of the proposed types.

- a) On the Lagoon side (north side): The coastal protection would be carried out through sand-filled bags as shown in figure 2.8 of EIA report subject to the final design. The length of coastal protection is approximately 750 m.
- b) On Reef side (South Side): Proponent is not be required to make coastal protection as it will be made by Thilafushi Corporation Ltd. as part of their road connection between Old Thilafushi and new development.

3. It was said in the public hearing that a survey to determine the costs the public is willing to bear is carried out in association with IFC and that the results will be available within a week of the hearing. Need to provide details of this survey, together with an estimate of the costs the public have to pay for the service. This is stated in the ToR as well as the ToR requests for a public consultation of the greater male' area however this activity was not undertaken in the EIA report. Furthermore consultation and public surveys should attain data regarding which times the public prefers the waste to be collected, what size and number of bins ideal for the public?

CDE and proponent held a meeting with the Male' city council member Mohamed Abdul Kareem on the 27th December 2011 to discuss the results of the survey that was carried out with IFC.

- Male' City Council is still in discussion with Ministry of Economic Development to finalize a fee

structure, timings of waste collection. The results will be disclosed once discussions are over.

The proponent is committed to provide ideal size and number of bins for the public.

- 4. The number of liters of waste generated per household is calculated based on the estimate of 3 persons per household, how was this value attained? what the basis for this assumption was any census data used? (3 persons doesn't look as a realistic estimate for Male'**

According to Information Memorandum provided with bid documents (prepared by IFC) waste generation of Malé City and Greater Malé area for residential units is 0.8 kg/capita/day and for commercial units 0.86 kg/capita/ day.

As per the preliminary design the proponent intent to provide 7 to 10 lit capacity bins (two bins for each house), which will be sufficient for a household with 10 or more people.

Numbers and capacity of bins for commercial units would be estimated with reference to waste generation rate of Malé city. The proponent is committed to provide sufficient capacity of bins to each household.

- 5. The calculations for the size of the bins in apartment buildings is made based on the assumption that the height of the apartments are 3 floors, how was this assumption made? What if the building is 6 floors or 12 floors will a larger bin be provided to these households?**

Proponent is committed to provide sufficient size and number of bins according to type of the building. The number and size and capacity of bins for each apartment building would in consonance with the waste generation of that building.

- 6. Details of the tipping fee for the resorts and other commercial entities (eg: Male' International Airport) are not provided in the report. Provide arrangements made for such entities, how much will be the charge, what are the views of Ministry of tourism, MATI and other stakeholders such as GMR regarding this fee?**

According to Concession Agreement TGREMPL is authorized and responsible for treatment and disposal of the MSW received from Malé, Hulumalé , Huluhulle, Villingili and the registered resorts at RWMF at Thilafushi island. The international airport can also give their waste for the treatment and disposal being situated the Huluhulle iland. The tipping fees to be given to the Concessionarie for Treatment & Disposal for waste from these generators is same as stipulated in the Concession Agreement.

CDE and the proponent met Male' city council member Mohamed Abdul Kareem on the 27th December 2011. Male' City Council still has not finalized arrangements for waste collection or a fee structure for commercial entities.

- 7. Management of hazardous waste was another issue raised in the public consultation and also by the evaluators, what will happen to existing hazardous waste once the operation commences in Thilafushi?**

According to Concession Agreement handling and management of Hazardous waste is not part of this contract/CA . However TGREMPL will provide separate proposal in the form of DPR to Authority (MCC) for handling and disposal of Hazardous waste.

8. The number of participants in the health survey?

67 participated in the health survey.

9. Assess marine water quality at the burrow site. The water quality given in the report does not cover this site.

A fresh water sample will be collected at the burrow site before the commencement of the project, tested and the results will be submitted to the EPA. This will be included in the before monitoring program proposed in the monitoring program. Samples were collected from lagoon area and sea in the and around the existing dump site, (see appendix D - map of sampling locations), and the results of tests attached appendix C.

10. The source of trees and palms for the buffer zone needs to be specified in the report.

A source for trees and palms has not been identified yet. As per the preliminary survey by the proponent trees and palms will be brought in from India and Srilanka. The proponent will be all required permits from relevant ministries/authorities (Ministry of Fisheries and Agriculture) before the trees and palms are brought into Maldives. In addition the proponent will be submitted a list of trees to be planted and their source to EPA in advance for EPA's comment and approval.

11. For the proposed access road will any vegetation need to be cleared? if so provide details of the number and type of vegetation present in the road location?

According to site layout prepared by the proponent no vegetation will be required to be removed.

12. What are the locations for discharge of effluent if any? Was baseline water quality taken at this location? if not please provide baseline data

Effluent generated from Regional Waste Management Facility will be treated in leachate treatment plant. The treated water will be recycled. The same will be reused for landfill and treatment facility to minimize daily water demand of the facility.

13. Provide documenting evidence to show that the site described in the report has been handed to Tatva Global Renewable Energy (Maldives) Pvt Ltd to undertake this project.

Evidence Documents

- Concession agreement- Attached (appendix A).
- Land lease agreements – Draft is available. - Signed copy Will be provided once it is signed) (Appendix B)

APPENDIX A – CONCESSION AGREEMENT

APPENDIX D - WATER SAMPLING LOCATION