

STRATEGIC PLAN AND STANDARDS FOR
MARINA DEVELOPMENT
(INCORPORATING CCA MEASURES)
IN THE MALDIVES



FIELD VISIT AND
VALIDATION WORKSHOP REPORT

**Prepared for the UNDP and the
Tourism Adaptation Project (Ministry of Tourism)**

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1 INTRODUCTION

This Field Visit and Validation Workshop Report represents Deliverable 3, forming part of the preparation of the Strategic Marina Development Plan and Standards report. It covers the period of January 17th to February 5th during the time that the International Consultant, Mike Sharrocks, was undertaking the assignment work in the Maldives.

This report comprises three components: namely, a summary of the outcome of meetings held in Male; the site visits undertaken; and, the principal conclusions of the Validation Workshop that was held towards the end of the consultant's time in the Maldives.

2 MEETINGS HELD (IN MALE)

Monday, January 18:

Meeting with Ahmed Salih (Permanent Secretary) of the Ministry of Tourism, and Ahmed Siyah (Project Manager) of the Tourism Adaptation Project (0900).

Introductory meeting that focused on the content of the Draft Strategic Marina Development Plan and Standards (SMDP+S) Report. MS outlined a hierarchical marina strategy (primary, secondary and tertiary importance). Agreed that SMDP+S would be a framework for future work for the development of marinas. AS suggested a need to differentiate between government run and privately run marinas and to try to identify economic benefits from the safari/liveaboard sector.

Meeting with Ahmed Siyah and Shaha Shakeeb of the Tourism Adaptation Project (1030).

Covered the arranged meetings, proposed field visits and suggested validation workshop for the next three weeks. AS clarified that the field visit and validation workshop reports (Deliverable 3) could be combined into one report. Deliverable 4 would form a separate Final SMDP+S Report and Consultancy Report (that would review progress since the Inception Report).

Meeting with Aishath Ali (Director General) and Moosa Zameer Hassan (Deputy Director General) of the Ministry of Tourism, Ahmed Siyah (Tourism Adaptation Project) and other officials of the Ministry of Tourism (1300).

Both AA and MZH outlined the need to establish the rationale and purpose for marina development in the SMDP+S. This should include elements of a marina strategy as well as national tourism needs. The latter would include support for safari boat/liveaboard cruising as a means of diversifying the tourism product offer. This would include the introduction of the inhabited island cultural product, as part of the product mix, thereby attracting a greater variety of visitor arrivals, and the beginning of community-based tourism and supporting safari boat logistics (such as storage and supply facilities). AA suggested that it is important that marinas tie in with the safari cruise routes. MZH recommended that a meeting be arranged with the Ministry of Housing to identify support for infrastructure provision. This could tie in with marina development in atoll capitals or selected islands for the Maldives Safer Island Strategy (SIS).

Tuesday, January 19:

Meeting with Ahmed Anwar (Assistant Director, Planning and Strategic Development) of the Ministry of Environment and Energy, and Hamdhan Zuhair (Assistant Director) of the Environmental Protection Agency (0900).

The meeting discussed a range of environmental impact issues related to marina development and the safari boat sector. It was agreed that the implementation of a Strategic Environmental Assessment (SEA) would be helpful in raising certain issues (prior to an EIA, for example), especially related to impacts on protected areas, as

well as the consideration of strategic options and community involvement on strategic decisions.

A key aspect of the EIA that is weak and does not seem to be properly assessed is the long-term environmental impacts, such as longshore drift from dredging. Furthermore, the EIA is generally short (one month). The MEE/EPA is building up an environmental database, including for coastal processes, which would help to improve long-term assessments, such as for longshore drift. Although monitoring of post-development impacts may occur, the EIA should still be able to raise concerns related to the effects on long-term coastal processes. In 2015 EPA rejected some 5-10% of EIAs received. However, it is now understood that an amendment (in August 2015) to the Tourism Act has transferred EIA evaluation, assessment and monitoring responsibilities from the EPA to the MOT, and that some EIA process tasks have been delegated to the Maldives Marketing and Public Relations Corporation (MMPRC).

The meeting also discussed the need for Environmental Management Systems (EMS) for marinas and safari boats. There is currently some monitoring in place (principally by the MOT) in relation to licenses and certain issues (such as solid waste disposal). However, methodical and comprehensive check of the implementation of EMSs is needed it was agreed. This needs to be undertaken by marinas and safari boats as part of their operational requirements. Approval of EMSs should be tied to the issuance of licenses. EMS should cover solid waste storage and disposal, reuse of energy, recycling of water, sewage disposal, the use and discharge of engine oil for safari boats, the storage of hazardous materials and their safety aspects. The key issue of solid waste collection and disposal was also covered and problems of dumping by some safari boats. It was reported that one of four proposed regional waste management centres for the Maldives is to be opened in February in Raa Atoll.

Meeting with Moosa Zameer (the Minister) and Ahmed Salih (Permanent Secretary) of the Ministry of Tourism, and Ahmed Siyah (Project Manager) of the Tourism Adaptation Project (1000).

This introductory meeting covered the purpose of the SMDP+S report and what has been done so far. It was learned from the Minister that the award of contract for the construction of the Hulhumale marina and associated facilities is due very soon (and that there is a developer condition that no other marina be developed within 50 miles of it). However, there is also a new marina suggestion that is being advocated by LAM, 20 miles to the north, in Thulusdhoo (Kaafu Atoll). Thereafter, discussion focused on the potential locations for primary marina facilities, namely: Male/Hulhumale in North Male Atoll; Hanimaadhoo (adjoining the airport); and Addu/South Gan (hotel for roughly 150 rooms and marina proposal for 30-40 berths). These three locations would also be the main border and customs control points for the country. The Minister suggested that Haa Alifu Uligamu should only be considered as a transit point for use by independent yachts.

Meeting with Ahmed Migdhad (Director of Fair Trade Section) of the Ministry of Economic Development (1100).

The meeting initially discussed the issue of import problems and restrictions for safari boat biodegradable engine oil as highlighted in one of the researched documents.

AM had no knowledge of this and would look into what the problems were with this and respond. The issue of storage of supplies and materials for safari cruise boats was also discussed. Bonded warehouses are required for the storage of alcohol and pork products under the control of the customs authorities.

Wednesday, January 20:

Meeting with Ibrahim Asim (Senior Superintendant) and Aminath Uigath (Superintendant) of the Maldives Customs Service, and with Mohamed Ameer (Manager) and Aminath Abdul Rahman (Administrative Officer) of Maldives Ports Ltd. (0900).

Maldives Ports have prepared a concept plan for a marina and resort development (Gan Island Retreat) close to Gan International Airport. This project would be under their jurisdiction and would help defray some losses in running the public ferry network in the area. A concept plan was shown at the meeting. There would be a hotel on a small beach for up to 150 rooms, as well as a marina for up to 15 yachts/boats of up to 80m in length.

Customs and Immigration have a presence only at international points of entry, including at Haa Alifu Uligamu (as a northern point of entry for yachts and cargo ships), Male/Hulhumale, Gan airport and Hanimaadhoo airport. Marinas located next to these points of entry are likely to need direct transfer points to the customs and immigration facilities. A bonded warehouse (for pork and alcohol products), currently located next to Male airport, will be moved to Hulhumale marina area for ease of transfer to ships (and perhaps safari boats). Any other bonded warehouses adjoining marinas, if required, could not be accommodated on inhabited islands but could be provided as part of resort islands.

Information was subsequently sent by Ibrahim Asim on operating airports and ports, as well as customs and immigration facilities.

Meeting with Shazail Siyam (Deputy Minister) and Abdulla Jaufar (Assistant Director) of the Ministry of Fisheries and Agriculture (1100).

The Ministry of Fisheries and Agriculture (MFA) are building a marina for fishing vessels on Felivaru (Lhaviyani Atoll) as part of the industrial development there. Another two fishing marinas are proposed for Kooddoo (industrial island in Gaafu Alifu Atoll) and Meedhoo (inhabited island in Seenu Atoll), as well as a separate fishing marina as part of the Hulhumale development area. These marina facilities would be dedicated for fishing purposes only and would not be available to be shared by safari cruise boats. Generally, they would include cold storage facilities, accommodation and sports facilities for fishing boat crews.

Fishing marinas would be managed by the state-owned Maldives Industrial Fisheries Co (MIFCO), except for that at Hulhumale, which would be run by a private company (Ensis). MFA do not appear to have climate change adaptation measures for their fisheries sector, and it is understood that marina facilities are not being raised to accommodate the prospect of storm surges or rising sea levels.

Thursday, January 21:

Meeting with the Ministry of Finance and Treasury (Economic and Development Policy Division): Abdul Haleem Abdul Gafoor (Deputy Minister, Economic and Development Policy Division), Mohamed Imad (Director General), Aishath Saadh (Deputy Director General), Adam Saruvash Ahmed (National Consultant for Development Policies), Ali Abdul Raheem (Assistant Director), Ahmed Naeem (Senior Planning Officer), Nashaa Ahmed Naseem (Senior Projects Officer) and Fathimath Shamma (Assistant Planning Officer) (0900).

MFT provided some information on revenue sources from the safari boat sector (that is available from MIRA). There are three sources of government revenue from safari boats: from business profit tax (BPT); government service tax (GST) at 12%; and tourism green tax at US\$6 per person per night. An example of Q3 for 2015 was provided for 'tourist vessels' (generating US\$165,000) and it was advised that a more comprehensive picture could be obtained from MIRA.

As far as government funding for infrastructure projects is concerned (such as for marinas) this would be considered according to viable project proposals submitted by individual ministries. MFT has previously provided budgetary funding related to harbours and ports, for example, where they have been used principally for cargo handling or fisheries purposes under Public Sector Investment Projects (PSIP). Thus, for 2016 MIFT have received proposals for PSIPs amounting to US\$800million. However, the domestic budget for this year only allows for US\$350million for its PSIP allocation with a further US\$270million available in concessionary loans (at between 2.5-4% interest). Whilst funding for public sector purposes would be the prime focus for government infrastructure projects, there would be consideration given to contributory funding for public-private sector project funding.

Meeting with Ahmed Niyaz (Acting Managing Director) and other representatives of the Maldives Tourism Development Corporation (1100).

MTDC was set up in 2006 as a public limited company (45% government owned and 55% private including publicly offered shares). It's charged with investing into resort islands and has completed four projects to date: Magudhuvaa (for Ayada Maldives) in Gaafu Dhaalu Atoll; Kihavah Huravalhi (for Anantara Kihavah) in Baa Atoll; Embudhufushi and Olhuvelhi (for Niyama Maldives) in Gaafu Dhaalu Atoll; and, Heerathera in Seenu Atoll. Four more projects are in the pipeline. One project, in Uligamu, which originally included a hotel and marina, was dropped in 2012 because of lease issues following an amendment to the Tourism Act. This change determined that resort lease fees would be based on site area and not on rooms, as was previously the case. This made the resort project unviable. However, the harbour was completed before the resort was abandoned.

Meeting with Ahmed Zubair Adam (Director of Blue Horizon) and Member of the Executive Board of the Liveaboard Association of the Maldives (1300).

There are 170 liveaboard/safari boats currently registered and the total number of boats is increasing at the rate of roughly 5 vessels per annum. A number of operators are purchasing second hand craft from Egypt as the tourism industry there is

experiencing a downturn. This could lead to some oversupply in the Maldives safari cruise sector. Notwithstanding this, safari boats are growing in size (up to 50m in length) and increasing in facility comfort. Safari yachts are typically up to 20m. Most safari cruises tend to undertake diving and snorkelling activities (90%) with the remainder surfing. Some also include visits to inhabited and picnic islands. During the surfing season (May to September) there are congestion issues in the Male Atoll area. Some safari boats have taken to anchoring in Mushimasgili (a 'picnic' island), almost on a permanent basis, which is blurring the lines between resort and safari cruising.

Dhiyaneru (some 20 miles northwest of Hulhumale) was considered as a location for a safari boat bunkering and sheltering location. The bidding process for the marina there was cancelled in 2013, when Maldives Ports took over and then handed the island to Maldives National Defence, who have since directed safari boats sheltering off Hulhumale to a location near the industrial and solid waste refuse island of Thilafushi (scheduled for February 2016). AZM was clear that this would not be suitable. He was doubtful about the prospects for safari boats being allowed to use the new Hulhumale marina on a permanent basis. The Hulhumale master plan for a marina will include a cruise terminal for two liners and 300 berths for boats. Currently, if safari boats need to undertake repairs then they stay in the South West Marina in Male and only for a three-day maximum.

AZM was receptive to the idea of a hierarchical range of marina facilities with a primary level linked to international airports (Hanimaadhoo, Male and Gan) with perhaps a secondary level of marinas in Laamu, Noonu, Meemu, Baa and Vaavu atolls. MS explained that these marinas could also take in solid waste for processing, compacting and transporting to regional waste centres (based on an electronic control monitoring system for easy checking), and facilities such as a café and some accommodation for crew, food storage, a clinic, boat repair and cleaning. Meteorological and risk management facilities could also be incorporated. It was also explained that inhabited island and resorts could also accommodate a marina facility. AZM expressed concern about the solid waste disposal issue and the need to establish some sort of quality system. There was some discussion about the implementation of an EMS to be applied at a broad obligatory level for safari boats (as well as resorts) and perhaps linked to licenses.

Sunday, January 24:

Meeting with Mohamed Nasheed (Managing Director of Island Sailors Pvt Ltd) and Member of the Maldives Association of Yacht Agents (0900).

MAYA members provide formal clearance work for yachts and other vessels entering into Maldivian waters. Cruise ships, independent yachts and charter boat companies (including 'super yachts' of 40m-150m in length and up to 10m depth) are dealt with by MAYA members. MN provided a breakdown since 2011, as follows:

2011:	Cruise Ships – 14;	Super Yachts – 28;	Yachts – 88.
2012:	Cruise Ships – 13;	Super Yachts – 29;	Yachts – 54.
2013:	Cruise Ships – 11;	Super Yachts – 25;	Yachts – 45.
2014:	Cruise Ships – 7;	Super Yachts – 43;	Yachts – 47.
2015:	Cruise Ships – 11;	Super Yachts – 49;	Yachts – 46.

Super yacht owners are reluctant to spend too much time in the Maldives because of the lack of suitable facilities. Notwithstanding this, numbers have almost doubled since 2011, and MN claims that if suitable marina and berthing facilities were provided then this could release currently restricted demand and, furthermore, enable yachts of all sizes to stay longer. In the case of smaller yachts, numbers have halved and this could be the result of piracy conditions along the Somali coast, for example, as well as increases in customs fee charged upon entry into Maldives. However, MN states that this is less an increase and more a more rigorous implementation of already set fees.

Hulhumale cruise terminal would allow for two cruise ships to berth (a security area linked to the airport would be needed). Cruise ships sometimes anchor off Bandos Island Resort in order to allow passengers to use a nearby picnic island. The two larger cruise lines (Costa and Princess) visit the Maldives and each has roughly 2,000 passengers. Smaller cruise ships (with 700-1000 passengers) also visit Maldives. Ships call in on Maldives from Dubai, Salalah/Muscat, Mahe, Colombo, Madagascar, Andaman Islands, Langkawi and Phuket. For Hanimaadhoo and Gan, as possible points of call for cruise liners, offshore mooring would be sufficient with transfer of passengers by launch. MN understands that the new Hulhumale marina could provide for super yacht berthing. Other than Hideaway Dhonalkulhi, MN understands that the One and Only Resort at Reethi Rah (Kaafu Atoll) also have a marina that would accept yachts and safari boat visits. Generally the super yachts are inclined to prefer resort stays than the smaller yachts, which are more likely to visit inhabited islands.

Facilities at marinas should include water and power provision and the dropping off of solid waste for processing, compacting and transfer, as well as basic repair work. The three regional ports (Hithadoo, Kulhudhuffushi and MCH) would be able to provide significant repair work for yachts and safari boats. MN provided additional information after the meeting such as the cruise liners that stopped in the Maldives.

Meeting with Hassan Abdul Muhsin (Assistant Director of EIA section) of the Maldives Marketing and Public Relations Corporation (1400).

Meeting focused on the EIA process, of which some responsibilities have been transferred to MMPRC. HAM explained that an EIA is initially undertaken by a consultant appointed by the developer, for example for a resort. The completed EIA is then submitted to the MOT, which processes the EIA in its legal section. The EIA is then passed across to MMPRC who appoint consultants (two or three for each EIA) to review the EIA content. MMPRC then assess the consultants' reviews and pass the decision letter on to MOT to issue the decision. In the five months since MMPRC has undertaken the administrative work for this process, 41 EIAs have been undertaken. HAM was unable to provide information on how many of these EIAs had been rejected or required amendments. Local communities that might be affected by a proposed development can, upon request, look at the content of an EIA, as well as the IEE (scope of work) for the full EIA.

Tuesday, January 26:

Meeting with Abdulla Suood (Tropical Island Collections, Secretary-General) and Munas (Vice-President) of the Maldives Association of Travel Agents and Tour Operators (1400).

MATATO are an association with 90 members that regulates the practice of inbound tour operators (MATI focus on hotels), of which 10-12 members deal with safari cruises. Almost all are Male based. The key concern for safari cruise operators is marinas for berthing and servicing of cruise boats. AS sceptical about Hulhumale marina operating within the next ten years and thinks that a major marina should be located outside the Male Atoll area because of boat congestion.

Sunday, January 31:

Meeting with Meeting with Zahid (Deputy Director-General, Climatology) and Ibrahim Humaid (Seismologist) of the Maldives Meteorological Service (1300).

MMS have five stations for meteorological data collection at Hanimaadhoo, Hulhule Island, Gan, Kooddoo and Kaadehdhoo. There are also 20 automatic weather stations, some of which are not operational. Changes to weather conditions in the last 10-15 years have focused on:

- Heavier and more frequent tropical downpours (resulting in flooding to islands) being experienced. In November 2015, rainfall of 228mm in one day in Addu City was recorded as the highest since records began (1975);
- There is a higher prevalence of sea swells and a greater flooding intrusion into islands. This happens on a significant level once a year, predominantly during the South East Monsoon (July-August). The southern atolls tend to be more affected, although Male did experience a high wave event in September 2015, which flooded much of the north of the city (at roughly 2m amsl). The most serious event since the 2004 Tsunami was in November 2012 when 50 islands were flooded;
- Dry seasons (December-May) are becoming more extreme and this is combined with the increased salinity of aquifers due to sea swells, which has led to greater scarcity of potable water; and
- Winds have become stronger and more extreme, and less predictable.

MMS has a number of notification procedures based on a white, yellow and red warning alert system. There are hot lines with media outlets, security services and disaster management centres. Fax bulletins are sent to these agencies, as well as SMS phone alerts to all members of the public.

Discussion then followed on marina facility needs. MMS already have staff at weather centres at Hulhumale, Hanimaadhoo and Gan. Secondary marina points could incorporate automatic weather centres, with tertiary marinas having direct communication links to MMS. MMS have only one wave observation system

(through floating buoys) in Gan and would want to have another two in the open sea in the Male and Hanimaadhoo areas. Only one Doppler weather system exists with a 250km radius in the Male area. MMS would be looking for another two, with one between Hanimaadhoo and Male and another between Male and Gan. These would need to be on top of towers. It could be that a secondary marina location could accommodate these.

MMS also expressed a need for better communication systems, perhaps through an automatic loud hailer warning system for storm conditions or high wave events. Z and IH seemed to agree that lifting key marina facilities by 2.5m above sea level (rather than the current 1.5m) would probably be sufficient for the next 15-20 years.

Meeting with Mohamed Ibrahim (Minister of State) of the Ministry of Housing and Infrastructure (1330).

Discussion centred on the potential for sharing of existing marina and harbour facilities for safari boats, such as in inhabited islands and particularly SIS locations. Tourism-related marinas (for safaris/yachts) would help to support the harbours accommodating the ferry networks. MI expressed doubts as to whether the new Hulhumale marina would be able to accommodate the needs of safari boats as HDC would hope to rent to high value super yachts. Consequently, there may need to be another location in the Male Atoll for safari boat sheltering and support facilities.

Thursday, February 4:

Debriefing meeting with Ahmed Salih (Permanent Secretary), Aishath Ali (Director General) and Moosa Zameer Hassan (Deputy Director General) of the Ministry of Tourism, and Ahmed Siyah (Project Manager) of the Tourism Adaptation Project (0900).

3 FIELD VISITS

Friday, January 22:

Depart from Male at 2320 (on Thursday, January 21). Arrive Hanimaadhoo at 0045 (Friday, January 22). Stay at Hanimaadhoo Airport guesthouse.

Visit to Hanimaadhoo town, barefoot hotel and guesthouse. Depart by speedboat at 0800 to Hideaway Dhonakulhi Island. Meeting with Mohamed Shujau (Recreation Manager) of Hideaway Dhonakulhi and visit to marina (0900-1130).

Hideaway Dhonakulhi marina was built 12 years ago (then costing roughly US\$1million) when the property was run by Coco Palms and before Hideaway Resorts took over. It currently has 20 berths and previously had a capacity for roughly 25 boats before a pontoon had to be removed for repairs. During the last five years the marina received roughly 12 private yachts (in 2010 it was 22 yachts) and two or three safari boats per year. Boats of up to 50m in length can be accommodated. There is a fixed pontoon with an enclosed reception centre and floating pontoons further out. The marina is to a large extent naturally protected and there is minimum sea swell or tidal rise. There is a 300m long channel, which is up to 30m deep.

Hideaway charge US\$40 for offshore mooring and US\$200 for pontoon mooring per day. Diesel, water and power can be provided but not bilge/sewage pumping services. Solid waste can be taken from the boats by the resort for processing, compaction and transfer (to a regional waste management centre or Thilafushi). Yacht crew and safari boat passengers can also use the restaurant, café, beach and pool, and clinic services. The resort is 35 hectares in size (700m by 500m) and has 126 villas (260 beds) and 380 staff and an annual average occupancy of 75% (villas are charged at roughly US\$600-US\$3,000 per night).

Travel by speedboat (1145-1230) to Haa Alifu Uligamu. Meeting with Haa Alifu Uligamu Council representatives (Imad - Council President and three other members) at 1430. Visit harbour (1600). Stay overnight at Uligamu homestay.

Uligamu harbour was built in 2008 as part of an agreement with MTDC that was linked to a proposed resort development close to the village. Whilst the harbour (accommodating small passenger, fishing and coastguard boats) has been completed with breakwaters, the resort development was abandoned following a change in the amendment to the 2010 Tourism Act, which linked lease fee payments to site area rather than the number of rooms to be accommodated. This made the proposed resort unviable and there are now half-finished buildings on site.

Uligamu currently receives roughly 40 yachts per year (2015) for customs and immigration clearance. This is a drop from 120 in 2009 and the decline in yacht visitation is attributed to the growth in piracy and an apparent increase in customs charges. However, there are positive views recorded from yacht owners of the speed of customs and immigration clearance. Local agents are needed for yachts to process the administrative requirements. Total costs are US\$60 per yacht and US\$350 for a 90-day cruising permit. December to March is the high season for yachts, which typically stop on the way from Sri Lanka, India, Thailand and Malaysia. Uligamu has

basic customs and immigration facilities near the port, as well as an office for the Maldives National Defence Force (principally for the coast guard) combined with a Maritime Rescue Coordination Centre office. A new building is being built for customs and immigration facilities closer to the harbour.

Yachts are currently moored offshore and are not allowed into the harbour unless there are rough seas. Uligamu village often provides food, laundry, water and power services if requested by yacht crews. There have been requests from yachts for improved water and power supplies, and also internet connection provision. There is one basic metered power and water supply point at the harbour and this could usefully be increased. Light standards are provided around the harbour edge. Another issue is the need for offshore mooring buoys, as yacht owners do not want to anchor in the reef (and are prepared to pay for a buoy facility).

A waste compaction unit could also be usefully provided in the village. However, whilst the village itself was relatively clean and tidy, rubbish was dumped in the adjoining date palm forest and this needs to be urgently cleared and dealt with. A proper solid waste collection, sorting, compaction and transfer system is needed for the village, and could be utilised for rubbish from yachts upon payment of a small fee. Similarly, Uligamu village should also have a sewage bio-filtration unit that should clean sewage water to irrigation standard for its 800 population.

Saturday, January 23:

Travel by speedboat (0930) to Hanimaadhoo Airport (arrive 1045). Visit to Hanimaadhoo town and harbour. Depart Hanimaadhoo airport at 1310 and arrive in Male at 1415.

There are basic pontoons available on the west side of Hanimaadhoo island, and very close to the airport. This accommodates Hideaway Dhonakulhi's launch boat and passenger boats taking people to nearby islands (such as Uligamu and Kulhuduffushi). There has been a channel cut through the reef for boat access to the pontoons. Upgraded marina facilities should include expanded and widened pontoons for the berthing of larger safari boats and yachts, improved pedestrian access and a sheltered waiting room for passengers. Cruise liners could be anchored offshore with a shuttle boat service to the marina. There have been some grandiose ship terminal concept plans proposed for the location in the past but nothing has come of these.

Additional facilities close to the marina could be provided between the existing marina and airport terminal, such as shops, a clinic, upgraded cafes and restaurant. Storage facilities (including for refrigeration units) could be provided close to the airport from which safari boats could resupply. There could also be bonded warehouse units. Basic repair facilities could also be provided for safari boats and yachts close to the marina or in Hanimaadhoo harbour, just a few kilometres north. However, significant repairs would probably have to be done at Kulhuduffushi regional port. The government guesthouse next to the boat arrival pontoons should also be upgraded as transit accommodation for visitors. There are also guesthouses and a barefoot resort in Hanimaadhoo five minutes away. The town also has a harbour with breakwaters and a fuel supply point.

Monday, January 25:

Ferry to Hulhumale. Meeting with Mr Mohamed Saiman (Managing Director), Ismail Shan Rasheed (Research Architect) and Fathimath Jaishan Hameed (Investor Relations Officer, Business Development) of Housing Development Corporation (HDC) (0900). Visit Hulhumale Phase 2 and the proposed marina area.

HDC are managing the development of Hulhumale, which will be a new city planned to be twice the population size of Male. There would be a science and technology zone, a tourism island, a heritage and cultural area, light industrial park, residential development (including social housing), business district and a youth city (sports arena and recreational facilities) in the new city. Phase 1 development in Hulhumale has not been completed and currently accommodates a population of roughly 35,000. Once Phase 1 and 2 have been completed then it's envisaged that there would be a population of 230,000. Phase 2 development works are about to start one year after the completion of the reclamation (in January 2015) of northern Hulhumale.

The cruise terminal and yacht marina will form part of Phase 2 development, for which site formation works have recently started. The marina pier will form the northwestern edge of Hulhumale. The marina and cruise terminal area would cover 100 hectares, of which actual developed land would comprise 24 hectares. There would be a cruise liner terminal, a yacht club (with exhibition space), water sports area (27 hectares) and roughly 300 berths for yachts/boats on pontoons extending from the main pier.

The cruise terminal would accommodate two ships of up to 220m in length, each of which would have up to 2,000 passengers. It is planned to be operational by 2019 together with roughly 70-80 berths of the first phase of the marina (of the total of 300) for boats of up to 37m length. There would also be cafes, restaurants and ancillary service facilities provided along the marina pier. The second phase of the marina would be available by 2023. There would be shuttle bus connections from the cruise terminal to the airport and other parts of Hulhumale. The northern end of Hulhumale would comprise a tourism island with hotel, resort facilities and apartments, some of which would be arranged around a beach. HDC hope that the cruise passengers could use some of these facilities.

Currently, safari cruise boats and yachts moor off the western coast of Hulhumale, close to the existing Male-Hulhumale ferry terminal, with 80% of safari cruise boats moored in this location. During the construction of the marina there would be temporary shelter facilities for safari boats in Thilafushi prior to the availability of the first phase of pontoons by 2019. All of the 300 berths would be available by 2023 for safari boats, yachts and super yachts. Basic repair and cleaning facilities would be available, although any significant repairs would have to be undertaken in Male or Thilafushi. There would be storage facilities available for equipment and food for use by boats along the marina pier. The marina operations would most likely be contracted out to a private operator.

Thursday, January 28:

Depart from Male at 0735. Arrive in Gan at 0905. Check in to Equator Village resort.

Meeting with Addu City Council representatives: Abdulla Sadhiq (Addu City Mayor), Ali Fahmee (Councillor), Mohamed Sadhiq (Director) and Fasahath (Media Officer) at 1100. Visit to the proposed Gan Island resort and marina, Eidhigali Kilhi Protected Area, Koatthey Marine Protected Area, Hithadhoo harbour, Hithadhoo port and Feydhoo port (1200-1530).

The meeting discussion focused on the proposed Maldives Ports marina and hotel on Gan Island. It would be located adjoining the causeway to Feydhoo, on the opposite side of which the extended runway for Gan airport is being constructed. The marina would be in a sheltered site and is where coastguard boats and other craft already moor. The location is close to Equator Village Resort, and an associated hotel would take up the Gan Island Resort/Dhoogas site (currently closed), which is roughly five minutes drive from Gan airport. The marina area would be roughly eight hectares in size. The new hotel would take up the northwestern tip of Gan Island (along the eastern edge of the marina). The proposed hotel landside of the marina could be used for café, shops restaurant and ancillary offices, whilst a strip of land on the northern edge of the causeway, or along the western side (at the eastern tip of Feydhoo), could be used for additional facilities such as storage and cleaning facilities. Visitor accommodation next to the marina would comprise the new 150-bed hotel or the Equator Village resort. Maradhoo harbour, roughly three kilometres north of Gan Island, could undertake repairs to boats on its slipway. Hithadhoo Regional Port, roughly ten kilometres north of Gan Island, has a bonded warehouse from which safari boats could take supplies.

Last year roughly 50 safari boats visited Gan. One or two medium sized cruise ships (with 700-1000 passengers) also stop every year on their way to eastern Africa, Madagascar or Mauritius. Currently, safari boats and international cruise vessels moor off Feydhoo. Visitors on cruise boats can visit many dive sites in the Seenu Atoll area, with some just offshore from the proposed marina location. There are also former RAF 'heritage' buildings, the Eidhigali Kilhi mangrove protected area in the promontory from Gan Island to Hithadhoo, as well as the Shangri-La Vilingili Resort and Spa just to the east of Gan, all of which could keep safari boat visitors in the area occupied for at least two or three days.

Depart from Gan (Maldivian Airlines at 1925. Arrive in Male 2055.

Wednesday, February 3:

Visit Azalea cruise boat off Hulhumale (1130).

Boat with nine rooms for 18 passengers being fitted out after its recent purchase from Egypt. Has a bar/lounge, small dining area and top sundeck and Jacuzzi.

4 VALIDATION WORKSHOP

Validation Workshop - Tuesday, February 2 (0900-1130):

Workshop Purpose: The Validation Workshop was held to discuss the content of the Draft Final Strategic Marina Development Plan and Standards Report, which would be submitted towards the end of February for comments.

There were 25 attendees, of the 35 invited, at the Civil Service Commission Training Room on the 12th Floor of the Velaanaage government building. The attendee list forms Figure 4.1 below.

Introduction and Presentation Content: The workshop started with an introduction to the project by Ahmed Siyah, Project Manager of the Tourism Adaptation Project.

This was followed by opening remarks by Hussain Lirar, the Deputy Minister for the Ministry of Tourism.

Mike Sharrocks, the International Consultant commissioned to prepare the Strategic Marina Development Plan and Standards Report, subsequently presented a PowerPoint summary of the findings and conclusions of the work undertaken. This covered the following topics:

- The purpose of the SMDP;
- Work undertaken on the assignment since late December;
- The SMDP report structure;
- The need for marinas;
- Key environmental concerns;
- Strategic marina proposals;
- Marina standards and facilities;
- Implementation; and,
- The immediate next steps.

Key Questions and Remarks: The second session of the workshop was taken up by the discussion and comments from attendees.

Housing Development Corporation (HDC) (*Ismail Shan Rasheed*) stated that whilst the absolute potential capacity of the marina could be 700 berths, this depended on boat size as well as the marina developer and operator's requirements. Consequently, it was safer to assume that at least 300 berths (for boats of between 18m-45m in length) could be made available. The concept plan that had been presented formed a

basis for agreements between HDC and the selected developer/operator and could be subject to change as a result.

Liveaboard Association of Maldives (LAM) (*Ahmed Asif* and *Mufeed Abdullah*) made the point that safari boats now typically have an attached *dhoni* dive boat and that this would increase the berthing needs, for example at the new Hulhumale marina. Thus, it could be assumed that rather than 170 registered safari boats there would be an equivalent total of 340 boats (including the dive boat). The main boat could be up to 50m in length and the dive boat 22m. This would most likely need just over 600m² of berthing space per safari and dive boat. Whilst LAM would be happy to have boats moored in the marina, there was uncertainty as to how many spaces could be allocated for safari boats and what berthing prices would be offered.

HDC responded that the proposed marina area would amount to 288,000m². In approximate terms this would enable an equivalent of 480 berths for the LAM sized boat requirements. The principal issue with the marina accommodation focused on what sort of boats would be berthed there and this would be dealt with at the detailed planning stage and, more relevantly, when the requirements of the appointed marina operator would be determined. It is only at this stage that the number of super yachts, smaller yachts and safari boats for Hulhumale marina could be finalised.

LAM also made the point that most safari boats have one engine only. This would present constraints on manoeuvring within the marina area, and hence require more space to do so. The government has already instructed safari boat operators to relocate their vessel mooring from Hulhumale to Gulhi Falhu by February 26th this year. Whilst this location would be suitable, the principal problem would be the impacts from rubbish being processed on the adjoining island of Thilafushi, where open pit burning is practiced. This results in continuous smoke, dust and infestation by insects, which extends into Gulhi Falhu, which would negatively affect LAM's business prospects. There was also a need for an access channel to be cut into the Gulhi Falhu lagoon for larger vessels.

LAM requested that the current mooring location allowed for yachts (near the stage one construction area for the cruise terminal/marina) off the northwestern sea frontage of Hulhumale be extended. Safari boats needing mooring space, for example, have been required to relocate to Gulhi Falhu, an uninhabited island with a small atoll area between Thilafushi and Viligili (Kaafu Atoll). The problem with this location is the proximity to Thilafushi landfill area and the practice of open burning of waste as well as dust dispersal. If this could be properly controlled with a closed system of incineration implemented, then Gulhi Falhu could be ideal for mooring safari boats even on a permanent basis, as the island is naturally sheltered. If this could not be done then LAM members would strongly resist the move. A channel would need to be built through the coral to gain access to internal atoll area. Basic ancillary support facilities would also be needed.

Male City Council (MCC) (*Shabau*) supported the view that there are major environmental risks in moving near Thilafushi, principally because of open refuse burning. Hence it is not an ideal location, unless the environmental conditions are mitigated.

Environmental Protection Agency (EPA) (*Mariyam Rifga*) explained that recently a Waste Management Corporation (WMC) had been formed, which would manage solid waste processing at Thilafushi, and it had started operating work last month. Moreover, the Ministry of Environment and Energy already has a waste management policy in place. Also the EPA has proscribed open pit burning as part of their waste management regulations (Waste Management Regulations, 2013). However, to date this has not been properly implemented, although in future the WMC would be dealing with that. This would also apply to marinas dealing with solid waste processing and added that there should also be an oil contingency plan in the event of spillage.

LAM estimated that safari boats discarded roughly 50 litres of engine oil per week. On the issue of the use of biodegradable by safari boats LAM clarified that, whilst this could be obtained, the use of this was low because of high costs.

LAM requested that the Ministry of Tourism (MOT), HDC and the Transport Authority allow safari boats to remain mooring off Hulhumale until the environmental impacts from Thilafushi are properly managed.

MCC added that there needed to be government investment into facilities in Gulhi Falhu as well, and that there were doubts as to whether this would be accomplished.

The Ministry of Finance and Treasury (MFT) (*Aishath Saadh*) made the point there is a need to focus beyond berthing facilities at marinas. If we cannot provide the facilities required for a marina then it could not be functional. Furthermore, it should be up to the government to provide these facilities and to come up with the means to retain foreign currency within Maldivian economy. These are the issues that the government must confront before investment is committed.

HDC informed that their intention for Hulhumale is not only to provide a marina, but also to include other facilities such as shopping, restaurants etc. Moreover, by 2020, their plan is to develop other facilities in Phase 2 such as bonded warehouses. In Phase 1 there would be a multi-specialty hospital that would be accessible to those using the marina. Phase 2 of the marina would be developed together with a residential area. HDC is planning to build a heritage and cultural area, as well as a tourist island. The marina would also accommodate a 27-hectare area for water sports. The aim is to provide development that would increase the area's attractiveness for visitors.

MOT (*Hassan Zameel*) suggested that the possibility for providing safari boat marina facilities in Thulusdhoo (an inhabited island) should be considered. It is located north of Hulhumale in the Male Atoll area. There is also a large reef nearby.

LAM added that passenger transfer between safari boats and Male airport needs to be considered. In this respect Thulusdhoo would not be as convenient as Gulhi Falhu. In addition, Thulusdhoo would also be accommodating other vessels such as fishing craft and speedboats and there is a consequent danger of congestion. Nevertheless, Thulusdhoo could be considered as an alternative location.

LAM also pointed out that most repair facilities in the Maldives deal with wooden and fibreglass hulls (comprising the majority of safari boats). However, some safari boats and most super yachts were constructed with steel hulls thereby needing a different set of repair skills and facilities, which are more difficult to find.

MOT (*Moosa Zameer Hassan*) commented that a map identifying airport, port and repair facilities would be useful in the SMDP+S report. Some ports (such as Hithadhoo) would not be able to undertake the necessary repairs even though it was a regional port. Both LAM and MAYA agreed to provide information on available repair facilities.

MOT (*Abdullah Adam*) mentioned that it is important to learn from past mistakes. For instance, when the guesthouse business boomed on the inhabited islands, following a relaxation of regulations, there was no waste management policy in place. Hence the islands had no plan to deal with the increase in solid waste. This should not be repeated when the marinas are put in place.

EPA mentioned that all islands are supposed to have a waste management plan, as part of a National Waste Management Plan, and marinas should be part of this.

MOT (*Moosa Zameer Hassan*) stressed that the purpose of this strategic marina plan is about the need for marinas in Maldives. Services such as waste management should be incorporated but waste management itself is not the main focus for this work. What to do with the marine waste and what could be done to deal with the on-site waste should be addressed. It was added that, to date, there has been little improvement to the treatment of waste at Thilafushi. He also emphasised that this was the right moment for this strategic plan to be prepared, so that everyone could push the policy makers and align implementation with the issues discussed at this workshop. Marinas need to incorporate the necessary facilities that would form part of the specified standards.

Workshop Close and Concluding Comments: Moosa Zameer Hassan (Deputy Director General) of the MOT brought the Validation Workshop to a close with some concluding comments. Ahmed Siyah (Project Manager) of the Tourism Adaptation Project added that once Mike Sharrocks submitted the Draft Final Report on the Strategic Marina Development Plan and Standards, which would incorporate feedback from this Validation Workshop, then this document will be shared with the attendees for further comments. He added that everyone present had a stake in the development of marinas and that their input would be very important for a sustainable document.

Figure 4.1 Validation Workshop Attendees

Tourism Adaptation Project					
ATTENDANCE REGISTRY					
Workshop		Strategic Plan and Standards for Marina Development in Maldives			
Workshop Venue		Civil Service Commission, Training Room			
Workshop Facilitators		Mr. Mike Sharocks			
No	Participant Name	Designation	Organization Name	Contact Number	Signature
1	Hussain Lira	Deputy Minister	Ministry of Tourism	7942113	
2	Ahmed Salih	Permanent Secretary	Ministry of Tourism	7785753	
3	Aishath Ali	Director General	Ministry of Tourism	7778333	
4	Muosa Zameer Hassan	Deputy Director General	Ministry of Tourism	7772155	
5	Hassan Zameer	Deputy Director General	Ministry of Tourism	7772608	
6	Ali Shinar	Director	Ministry of Tourism	7900032	
7	Fathimath Nazya	Director	Ministry of Tourism	7933093	
8	Aminath Nuzla Homeed	Assistant Director	Ministry of Tourism	7877487	
9	Fathimath Sama	Assistant Director	Ministry of Tourism	8999228	
10	Razzaan Rasheed	Senior Planning Officer	Ministry of Tourism	8111133	
11	Aishath Aza	Assistant Resident Representative	UNDP	7908911	
12	Ahmed Fathih	Major	MNDF	8752402	
13	Miraz Mohamed	First Lieutenant	MNDF	8996472	
14	Mohamed Ibrahim	Minister of State	Ministry of Housing and Infrastructure	7771747	
15	Aishath Soadh	Deputy Director General	Ministry of Finance and Treasury	7778711	
16	Mariyam Riega	Assistant Director	Environmental Protection Agency	9147171	
17	Aishath Sahuma	Fair Trade Consultant	Ministry of Economic Development	7778961	
18	Abdulla Waheed	Assistant Controller	Maldives Immigration and Emigration	7783267	
19	Ibrahim Yahi	Deputy Director	Transport Authority	7944443	
20	Ahmed Rasheed	Harbor Master	Maldives Ports Limited	7771966	
21	Mohamed Homeed	Senior Superintendent	Maldives Customs Service	7908630	
22	Ibrahim Humaid	Salmologist	Maldives Meteorological Service	7975954	
23	Imal Shari Rasheed	Research Architect	HDC	7951977	
24	Shabou	Secretary General	Male City Council	7796141	
25	Imal Husein	Board Member	MAI	7781521	
26	Abdulla Suwad	Vice president	MAIATO	7771893	
27	Nasheed	President	MAYA	7782395	
28	Mohamed Mased Zahir	Mohamed Mased Zahir	Eco-Care	7873692	
29	Hazim Ahmed	Founder	Save the Beach	7428225	
30	Ahmed Syah	Project Manager	Tourism Adaptation Project	7999133	
31	Abdullah Adam	Small Grants Officer	Tourism Adaptation Project	8973320	
32	Shaha Shakeeb	Project Assistant	Tourism Adaptation Project	7988222	
33	Ahmed Younis Mohamed	Communications and Stakeholder Relations Officer	Tourism Adaptation Project	8966984	
34	Ahmed Adil	Secretary General	Liveaboard Association of Maldives	7772394	
35	Muheed Abdullah	Executive Board Member	Liveaboard Association of Maldives	7772403	
THOSE INVITED					
THOSE ATTENDED					