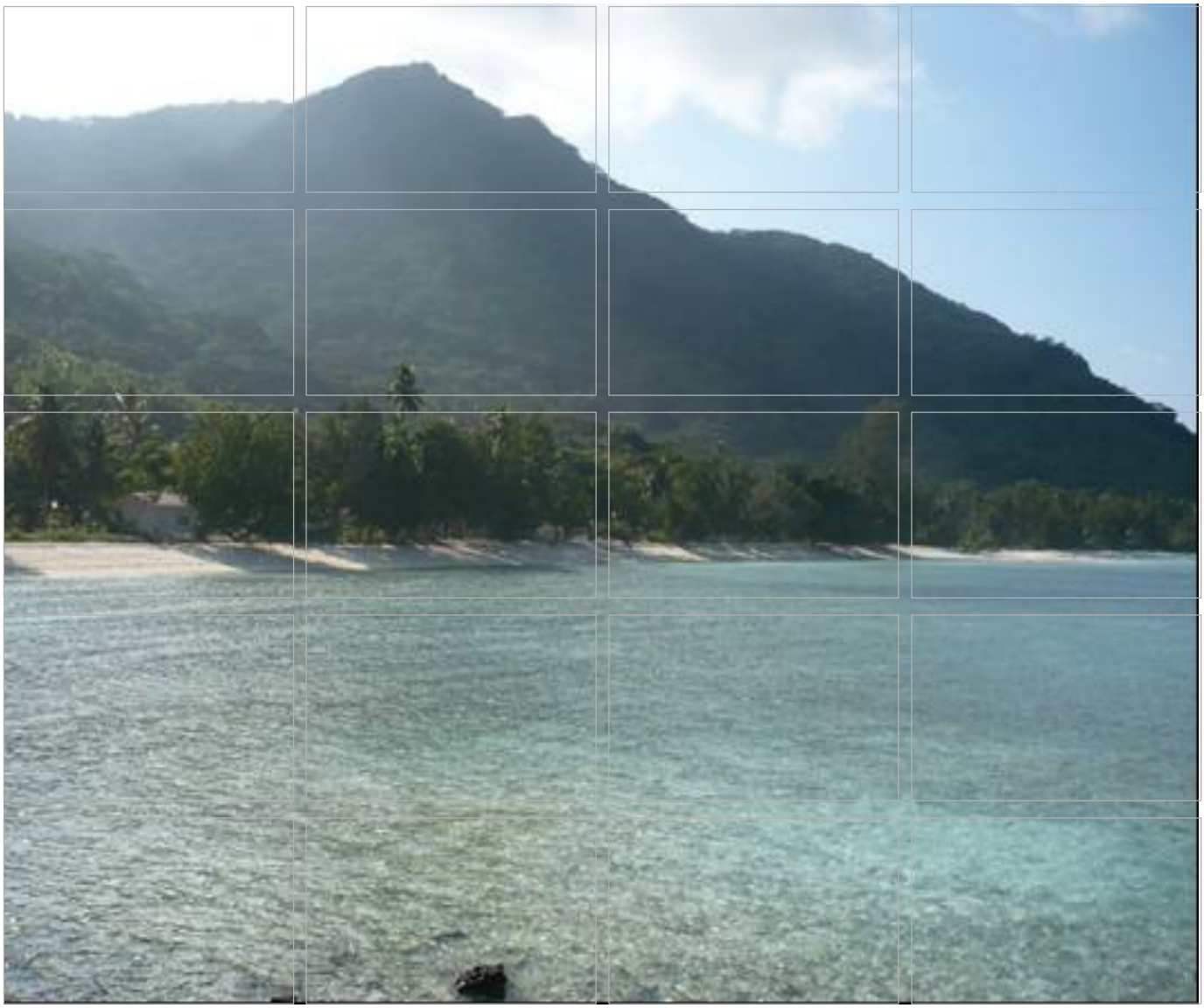

Gap Analysis and Scoping Report

Labriz Resort

Final

February 2010
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Gap Analysis and Scoping Report

Labriz Resort

Draft Report

January 2010

Prepared by: Kamal Govender
Jon Duncan

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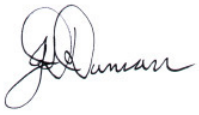
For and on behalf of
Environmental Resources Management

Approved by: Jon Duncan



Position: Partner

Date: 19 February 2010

CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

Labriz Resort, (hereafter called the Resort) located on Silhouette Island, Seychelles, approached the International Finance Corporation (IFC) with a view to refinancing a portion of their existing loan. After reviewing the Resort's Environmental Impact Assessment (EIA) Report the IFC requested an additional assessment to determine the gaps that exist between the IFC Performance Standards and the EIA Report and current operations.

Environmental Resources Management Southern Africa (Pty) Ltd (ERM) was appointed to undertake the gap analysis and develop the resulting action plan to guide the Resort in becoming compliant with the requirements of the IFC Performance Standards.

The remainder of this report is structured as follows:

- Section 1 presents the background, location and key activities of the project;
- Section 2 provides a detailed project description as well as a details of the current environmental performance of the project;
- Section 3 outlines the approach to the assessment;
- Section 4 presents a tabular summary of the gap analysis undertaken with regards to the IFC performance standards. A summary of the key gaps is provided along with a set of proposed supplemental actions for consideration by the resort;
- Section 5 presents the proposed action plan to close the key gaps identified;
- Section 6 presents a proposed time for the completion of the action plan.

1.2 PROJECT BACKGROUND

Labriz Resort is located on Silhouette Island in the Seychelles. Silhouette Island is owned by the Island Development Company (IDC), a para-statal entity that develops, controls and manages islands owned by the Seychelles Government. Prior to the construction of the Labriz Resort the island was home to a leaseholder who managed and operated a tourist lodge on Silhouette Island called the Silhouette Island Lodge.

In 2004 a joint venture was established between the Universal Enterprises (Pvt) Ltd and Silhouette Island Lodge to undertake the development of a 5 star tourism resort on 11 hectares of previously disturbed land on Silhouette Island. An environmental impact assessment of the proposed development

was completed in 2005 and following government approval construction began in 2005. Labriz opened in 2006 and the resort is currently in its 4th year of operation.

1.3 PROJECT LOCATION & ACTIVITIES

1.3.1 Location

Silhouette Island is the third largest granitic island of the Seychelles. It lies approximately 20km to the northwest of Mahe with a land area of approximately 20km^2 and a maximum altitude of approximately 750m.

Silhouette Island is surrounded by a National Marine Park declared in October 1987. The Marine Park extends around the entirety of the Island to a distance of one kilometre from the low water mark. It is understood that the Park has not traditionally been actively managed. In addition much of the Island is soon to be declared as a National Park (the resort itself is located outside the National Park). It is understood that plans are being made to develop management plans for the Silhouette Island National Park and Marine Park.

The Resort is constructed on land previously disturbed by the former Silhouette Island Lodge and historic farming activities.

1.3.2 Project Activities

Construction entailed clearing vegetation, identifying and keeping a nursery of indigenous vegetation for landscaping and re-vegetation activities, clearing of accumulated rubbish, clearing alien vegetation, earthworks, landscaping and construction, development of a wetland, development of the resort (villas, restaurants, spa, pools, tennis courts, shops and diving facility) supporting infrastructure and staff facilities.

The operational activities of the resort are primarily concentrated within the footprint of the resort. Two resort-related activities occur outside the primary resort footprint; scuba diving which occurs in the Marine National Park and walking/ hiking (1) along existing paths to various points of interest on the island.

(1) It is noted that guests are allowed to hike on the island, it is not an activity actively promoted by Labriz.

2 PROJECT DESCRIPTION

The Resort is situated on approximately 11ha of land. A high level summary of the key components that make up the resort are described in Sections 2.1 to 2.4 below. A photo log is provided in Annex B to provide visual reference to key operational aspects of the resort.

2.1 GUEST ACCOMMODATION AND FACILITIES

Guest accommodation totals 111 rooms, made up as follows:

- 9 individual 'Ocean View Pavilions' with one double-bed room;
- 8 individual 'Silhouette Pavilions' with one double-bed room;
- 6 individual 'Beach Villas with Plunge Pool' with one double-bed room;
- 57 individual 'Beach Villas' with one double-bed room; 2 pairs of inter-connecting villas;
- 30 individual 'Garden Villas' with one double-bed room; 2 pairs of inter-connecting villas;
- 1 'Presidential Villa' with 2 double-bed rooms.

Guest facilities include:

- Welcome facility and boat mooring facility in the Silhouette mini harbour;
- Main reception area and resort offices;
- The main restaurant, Teppanyaki Island, Italian Restaurant, Japanese Restaurant, Pizza Garden and the bar;
- The main pool with a timber-decked pool bar;
- Conference facilities;
- Shop and library facility;
- An off-site dive centre;
- 2 Tennis courts;
- A fitness centre;
- A Spa.

2.2 THE STAFF ACCOMMODATION

Junior staff are accommodated in units that sleep six. Each unit has bathroom facilities. A staff kitchen and dining room is also provided. The junior staff accommodation has 40 units.

Senior staff are accommodated in 16 double-bed and 12 single-bed quarters. Each unit has bathroom facilities.

Some Executive staff are housed in 7 individual apartments with two bed rooms, living room, kitchenette and bathroom facilities

Few Executive staff are housed in the IDC Village.

2.3 *RESORT STORAGE & TECHNICAL INFRASTRUCTURE COMPLEX*

The resort "back of house" comprises:

- The chemical storage facility, where all cleaning, pool, and other chemicals are stored.
- Repairs & Maintenance Workshops, where day-to-day repairs and maintenance to various pieces of resort equipment is undertaken. The maintenance areas are also for the storage or spares parts and in some case disused equipment.
- Main store room comprising dry goods, cold storage and blast freezers.
- Effluent treatment plant facility;
- Energy generation facility comprising 4 diesel generators
- Water storage and pump facility;
- Desalination facility;
- Solid waste storage area alongside the Silhouette mini harbour;
- Laundry & Housekeeping facility which includes a mini boiler room for steam generation.

2.4 *UTILITIES*

2.4.1 *Electricity*

The Resort generates its own electricity via four 580kWe diesel generators. Three are used continually depending on the load requirements with the fourth used as a back -up.

The four generators are located in a standalone generator room. The generators are fed by two 10,000l diesel storage tanks that are operated in series. The first tank is located out side of the generator room in a secure bunded area. This tank is fed by underground pipeline directly from the main diesel store operated by the resort. The second tank is located inside the generator facility in a separate room, no bunding is provided in this room. Waste heat recovery is undertaken from the generator sets as the basis for heating water which is directed to the staff quarters for use.

The resort operate and maintain a diesel storage facility on Silhouette, outside the resort area near the harbour. The diesel storage area is a secure bunded facility that holds approximately 90,0000l of diesel in two above ground storage tanks, 40,000l and 50,000l respectively. Diesel is delivered to the Island by barge on a regular basis and transferred by underground pipe to the storage area.

It is understood that the resort consume approximately 5,000l of diesel per day (Generators 3800 l, Boats 900 l, Incinerators 150 l, Boiler 150 1) . The resort consumes on average 14,000 Kwh of electricity per day (for the period Jan to Dec 2009) – it should be noted that is also includes the IDC village.

Presently the resort records daily energy consumption figures however it does not present report performance per m^2 of serviced space. The current IFC EHS Guideline for Tourism and Hospitality Development Guideline provides the following guidelines for electricity energy consumption for Luxury Service Hotels in a Tropical Climate:

- Excellent Performance - <190kWh/m^2
- Satisfactory performance - 190kWh/m^2 – 220kWh/m^2
- High performance - - 220kWh/m^2 – 250kWh/m^2
- Excessive - >250kWh/m^2

These bench marks are provided for comparative purposes with the intention of driving continual improvement. Based on an estimated 35 500m^2 of serviced resort area (Chief Engineer included Staff Village but excluding IDC) and an estimated Annual consumption of 5,475,000KWh the energy performance of the resort can be rated as approximately 155KWh/m^2 , which according to the IFC rating criteria is an excellent performance rating.

The total installed thermal capacity of the generator is loosely calculated as 5220kWt (5.22 MWt) – using a basic conversion of 1MWe = 3 MWt . On this basis the generator facility triggers the point source emissions guideline for Small Combustion Facilities - Emissions Guidelines (3MWth – 50MWth) of the IFC HSE Guidelines. These guidelines are summarised in *Table 2.1*below.

Table 2.1 Comparison to relevant standards and guidelines

Parameter	Resort - No measurement design criteria reported Pg 66 of EIA	IFC General EHS Guidelines and EHS Guidelines for Tourism and Hospitality Development	Seychelles Standard
Particulate Matter	53mg/ Nm^3	50 – 100 mg/ Nm^3	No Applicable Country Standard
SO_2	(as 0.5% S by Weight) = 293mg/ Nm^3	1.5% - 3.0%	No Applicable Country Standard
NOx	2400mg/ Nm^3	1,460 – 1,850 mg/ Nm^3	No Applicable Country Standard
Dry gas, excess O_2 content	Not reported	15%	No Applicable Country Standard

No direct emissions monitoring is currently undertaken on the site. The figures reported in the table are design values extracted from the EIA. It

should be noted that discussion with the Ministry of Environment indicated that due to the scale energy generation facility and the likely low level of expected air quality impacts that they do not undertake any Air Quality monitoring at the facility. In addition they further indicated that the lack of any suitable monitoring equipment or laboratory facilities in the Seychelles for Air Quality testing was noted as a constraint to air quality testing.

2.4.2 Water Supply and Water Demand

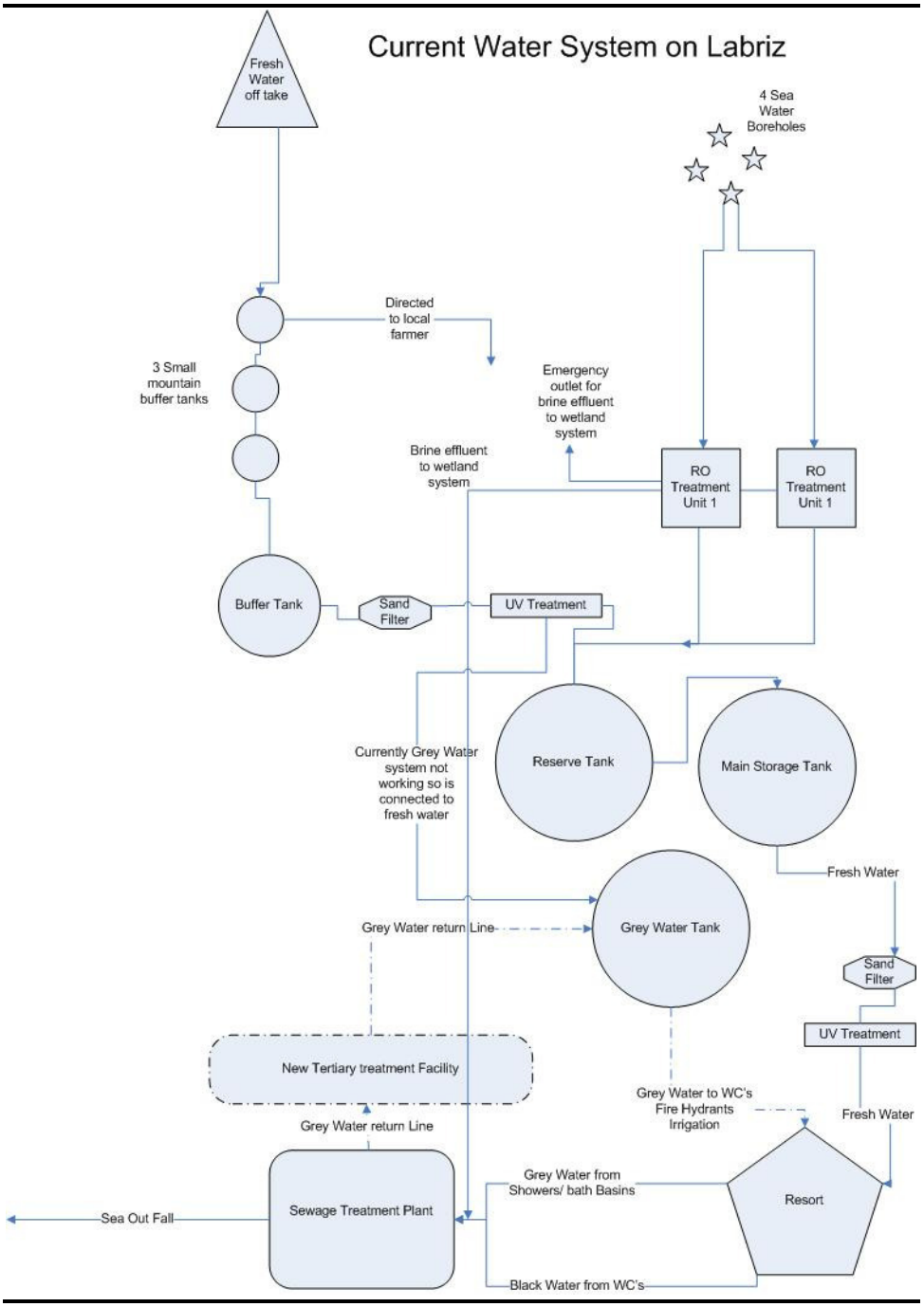
The primary water source for approximately nine months of the year is a natural spring on the Island. Limited testing of this spring in terms of its sustainable yield has been undertaken. Water is gravity fed from the spring via a pipeline to balancing reservoirs and a buffer reservoir. From the buffer reservoir water is treated (sand filtered and UV treated). From here water is piped to the main water storage tanks (2 tanks of 500 m^3 each). Water goes through a second treatment process (sand filter and UV treatment) before being pumped to the Resort users.

The resort currently has provision for a Grey Water system which aims to harvest grey water from the Showers, Baths and Basins of the Villa's for re-use on site in the Villa toilet flush system, landscape irrigation and charging of the fire hydrant system. Presently this system is not in use however once the final modification is made to the effluent treatment plant the grey water from the EFTP will be directed to a 500m^3 grey water storage for re-use.

During dry periods, approximately three months a year, water is supplied via the two desalination plants (each with a capacity of 100 m^3 per day). The desalination plant comprises two reverse osmosis units and gets water from four boreholes near the ocean. Desalinated water is then pumped to the main water storage tanks. Brine from the process is pumped to sea via the treated effluent sea outfall.

Figure 2.1 below provides a high-level overview of the current water reticulation system on site.

Figure 2.1 Water System on Labriz Resort



The resort maintains daily records of total water use. A summary of the water consumption is provided in table 2.2. below. Primary uses of water include villas, staff village, restaurants, pools, laundry and IDC village. A review of the total water used for the period January to December 2009 indicates that on average 4.23 m^3 of water are used per room night (based on the assumption that, due to fact that the Grey water system is not working, the total water used is equal to the sum of the Potable water and the Grey Water used less the average daily amount used in the IDC village – estimated at 68 m^3 per day).

Assuming there are an average of two guests per room night the amount of water used per guest per day translates **2.11** m^3 per day (note that this figures includes all water used in Staff village resort functioning, Laundry etc).

2.2 *Summary Water Consumption for 2009*

2009	Room Nights	Potable water Consumed m^3	Gray water Consumed m^3	Water Used by IDC (Avg 68m^3/day)	Resort Water Used m^3 (Pot + Grey- IDC)	m^3 per room night	m^3 per guest (assume 2 guest / room)
Jan	1196	7230	3060	2040	8250	6.90	3.45
Feb	1043	5360	1450	2040	4770	4.57	2.29
Mar	1509	7720	1860	2040	7540	5.00	2.50
Apr	1745	2000	7750	2040	7710	4.42	2.21
May	2014	7580	1570	2040	7110	3.53	1.77
Jun	2047	1540.5	7900	2040	7400.5	3.62	1.81
Jul	2148	9050	2010	2040	9020	4.20	2.10
Aug	1549	9250	2110	2040	9320	6.02	3.01
Sep	2405	9160	1690	2040	8810	3.66	1.83
Oct	2121	2121	2121	2040	2202	1.04	0.52
Nov	2183	8140	1660	2040	7760	3.55	1.78
Dec	1609	No Data	No Data	No Data	No Data		
Total	**21569**	**69151.5**	**33181**	**22440**	**79892.5**		
Avg	**1797.42**	**6286.50**	**3016.45**	**2040.00**	**7262.95**	**4.23**	**2.11**

The current IFC EHS Guideline for Tourism and Hospitality Development Guideline provides the following guidelines for water consumption for Luxury Service Hotels in a Tropical Climate:

- Excellent <0.9 m^3/guest night
- Satisfactory 0.9 m^3/guest night –1 m^3/guest night
- High 1m^3/guest night – 1.4 m^3/guest night
- Excessive >1.4 m^3/guest night

Based on a review of the above benchmarks the resort would be considered to have **excessive water** use (i.e. greater than 1.4 m^3/guest night). This indicates that there is potentially room better use of water resources. It should however be noted that once the grey water system comes on line it is expected that the water use figure will be reduced and the resort may well achieve a bench mark rating of **high** (i.e. 1m^3/guest night – 1.4 m^3/guest night).

These bench marks are provided for comparative purposes with the intention of driving continual improvement.

2.4.3 *Wastewater*

The resort has an above ground modular effluent treatment plant with the capacity to treat approximately 21m^3/hour of effluent. The treatment plant was designed to treat the two effluent streams that arise from the Resort; grey

water (water from showers and basins) and black water (water from kitchens and toilets). Currently all grey water and black water streams are metered and treated as a single effluent within the Sewage Treatment Plant (STP) before being disposed of at sea via a sea outfall pipe (approximately 1km into the ocean). Presently no treated grey water is used on site. This situation is however set to change with the inclusion of a tertiary treatment facility comprising sand filters and Ultra Violet light treatment. Once this tertiary system is in place the treated grey water will be pumped to a grey water storage tank for subsequent use in toilet cisterns, for irrigation purposes and for use in fire hydrants. This measure will reduce the Resort's water demand.

The resort indicated that the effluent quality is monitored regularly by the Seychelles Bureau of Standards. The following table compares the latest results of effluent testing by the Seychelles Bureau of Standards (January 2010) with the Seychelles standards and the requirements of the IFC EHS Guidelines.

Table 2.3 Comparison to relevant standards and guidelines

Parameter	Resort Performance *SBS Report January 2010*	IFC General EHS Guidelines and EHS Guidelines for Tourism and Hospitality Development	Seychelles EPA Standard
		Treated effluent	
Temperature (°C)	Not tested	Comply with local standards	30 (at point of discharge)
pH	7.29	Comply with local standards	5.5-5.8
Suspended solids	67mg/l	Comply with local standards	30
BOD at 20°C	69mg/l	Comply with local standards	30
COD	75mg/l	Comply with local standards	80
Free chlorine (Cl_2)	Not tested	Comply with local standards	0.5
Phosphorous (PO_4^{3-})	15mg/l	Comply with local standards	5
Nitrate (NO_3^-)	10.6mg/l	Comply with local standards	15
Nitrite ($NO2^-$)	Not tested	Comply with local standards	1
Oil and grease	Not tested	Comply with local standards	10
Total coliforms	Not tested	Comply with local standards	500
Faecal coliforms	Not tested	Comply with local standards	100
Faecal streptococcus	Not tested	Comply with local standards	100
Salmonella	Not tested	Comply with local standards	Must not be detectable

Note the test results are from the period 5th to 11th January 2010 and were undertaken by the Seychelles Bureau of Standards. The report indicated that the Suspended Solids, B OD and Phosphate reading were above the Seychelles EPA effluent quality standards.

2.4.4 Solid waste

All waste is either separated at source (different colour bins for different types of waste) or collected and separated at the incinerators. All garden waste is

disposed of at a site on the mountainside. All hazardous waste (including waste oil and hydrocarbons), plastic bottles and waste that cannot be burned is stored at a storage facility at the dock. From here this waste is sent to Mahe by boat for disposal at appropriate disposal facilities or for recycling (in the case of plastic bottles and paper).

The site operates two incinerators on site which are used to dispose both wet and dry waste. The double chamber incinerators are capable of incinerating 70 to 100kg/hour). Wet waste and dry waste are burned in a suitable ratio to maintain the furnace temperature between 800°C and 1,050°C. Incinerator start up and temperature is maintains through the ignition of diesel. There is presently no means of monitoring temperatures once the incinerators are in use. The incinerators have stacks heights of 11.7m above ground, the incinerator units are located on the mountainside, above the Resort. No air quality monitoring is undertaken in terms of the incinerator operation. Similarly no measurement is undertaken of the amount of waste generated by the resort so comparison with the IFC EHS Guideline for Tourism and Hospitality Development Guideline for waste generation for Luxury Serviced Hotels. For reference purposes these guidelines are provided below:

- Excellent <0.60 kg/guest night;
- Satisfactory 0.60kg /guest night – 1.2kg /guest night;
- High - 1.2kg /guest night – 2.0 kg/guest night;
- Excessive >2kg /guest night.

2.5 DEVIATIONS FROM DESCRIPTION IN THE EIA REPORT

There are no significant differences between the current operations and that described in the EIA Report. Accordingly, the management and mitigation measures outlined in the EIA Report remain valid. The key mitigation and management measures in the EIA Report have been incorporated into the Action Plan in Chapter 5 of this report.

3 ASSESSMENT SCOPE & METHODOLOGY

3.1 APPROACH

The assessment was carried out through a combination of desk-top based review of Project documents and a site visit involving observation of Company activities and interviews.

3.1.1 Documents Reviewed

The desk-top assessment relied primarily on the EIA report prepared for Project. Supplemental information provided by the Resort during the site visit was reviewed to verify findings (refer to full list of documentation reviewed in *Table 3.1*).

Table 3.1 ***Documents Reviewed for the Assessment***

Document Title	Date
Construction and Operation of a Beach Resort, Environmental Impact Assessment	April 2005
Labriz Employee handbook	Undated
Seychelles Employment Act (and Amendment)	Various
Workplace Disciplinary Procedure	Undated
Standard Operating Procedures Housekeeping Villas	Undated
Workplace Grievance Procedure	Undated
Utility Reports	January 2007 to December 2009
Diesel Consumption Report	December 2006 to December 2009
Setting Conservation Priorities – A Key Biodiversity Areas Analysis for the Seychelles Islands	2008
Silhouette Island Tsunami, Cyclone, and Flood Disaster Response Plan	December 2008
Silhouette, A Planning Study	1972
Report on Demonstration Exercise in the event of Tsunami Disaster	October 2009
Standing Operating Procedures for Security Staff	Undated
Renewal of Hotel Operating License	October 2009
Renewal of Hotel Operating License	October 2008
Letter from Chief Fire Officer	October 2009
Open Letter from the Ministry of Environment, Natural Resources and Transport	December 2009
Monitoring Reports from the Department of Environment, Public Health Department and the Environmental Health Section of the Ministry of Health and Social Development	Various (Latest dated October 2009)
Sewage treatment results - Seychelles Bureau of Standards	January 2010

3.1.2 Site Visit

The site visit was carried out by Kamal Govender and Jon Duncan of ERM Southern Africa from 11 January to 15 January 2010. The visit included a tour

of the "front of house" and "back of house" operations. The ERM team was joined by a biodiversity expert from the IFC, Lori Anna Conzo.

While on site, interviews were conducted with:

- Mr Vinesh Gupta (Labriz General Manager)
- Ms Julita Sinon (Human Resources Manger)
- Mrs Barnalli Gupta (Training and Recruitment Officer)
- Mr Ajay Joseph (Engineering Supervisor)
- Mr Gamini Prasanna (Security Manager)
- Dr Eranji Kariyawasam (Resident Doctor)
- Mr Palaniyappan Sivakumar (Executive House Keeper)
- A representative sample of the resort (non-management) staff
- Mr Glenny Savy (CEO of the IDC)
- Mr Gilbert Esparon (IDC Island Manager)
- Mr Alex Bonnelam (IDC Water and Sewage Supervisor)
- My Rolph Payet (Advisor to the Minister of Environment)
- Mr Flavien Joubert (Director-General, Wildlife, Enforcement and Permits)
- Mr Ronley Fanchette (Acting Director, Conservation)
- Mr Alain de Comarmond (Director, Environmental Assessment and Permits)
- My Justin Gerlach (Nature Protection Trust of Seychelles)
- Mr Phillip Morel (Pest Control Contractor)

3.2 PERFORMANCE STANDARDS

The gap analysis was undertaken with respect to the following two documents:

- the IFC Terms of Reference for an environmental impact assessment;
- the IFC Performance Standards.

With respect to the gap analysis against the IFC performance standards, the following six Performance Standards were deemed to be applicable:

- PS 1: Social and Environmental Assessment and Management Systems;
- PS 2: Labour and Working Conditions;
- PS 3: Pollution Prevention and Abatement;
- PS 4: Community Health, Safety and Security;
- PS 6: Biodiversity Conservation and Sustainable Natural Resources Management; and
- PS 8: Cultural Heritage.

Performance Standards 5and 7 were deemed not to be applicable for the reasons provide below:

- *PS 5: Land Acquisition and Involuntary Resettlement* was not considered because no voluntary or involuntary resettlement was required for the establishment of the resort. It is noted that some IDC staff accommodation was moved (by the IDC) prior to the resort leasing the land from the IDC. It is understood that the IDC staff are not accorded land tenure rights and as a result the IDC relocation of its staff from one set of accommodation to another does not trigger PS 5.

- *PS 7: Indigenous Peoples* was not considered because it was determined that there are no indigenous people (as defined by the IFC Performance Standard) in the Project's area of influence.

Given that the resort has been in operation for the last four years, the focus of the gap analysis was on the operational phase of the Project.

4 GAP ANALYSIS

The following sections describe the gaps between the EIA Report, current resort operations and the IFC Performance Standards. The results of the gap analysis of the EIA Report with respect to the Terms of Reference provided by the IFC are integrated into the results of our analysis for Performance Standard one.

The gap analysis is presented in tabular format per each of the relevant Performance Standard. Supplemental follow up actions are also presented as a basis for informing the Action plan presented in Chapter 5. It should be noted that the supplemental actions are intended to highlight the key actions from the gap analyses. They are not an exhaustive list of actions. The Action Plan contains the comprehensive list of gaps and outlines the measures required to address the gaps.

PS1
SOCIAL AND ENVIROMENTAL ASSESSMENT AND MANAGEMENT SYSTEMS

THEMES
(a) Environmental and Social Assessment, (b) Management Program, (c) Organization, (d) Training, (e) Community Engagement, (f)Monitoring, (g) Reporting

PS1-FINDINGS/ANALYSIS

(a) Environmental and Social Assessment

An EIA (comprising a biophysical and social assessment and an Environmental Management Plan) was compiled in April 2005 by SIGMA – Ove Arup and Partners. The EIA process complied with the Environment Protection Act (Act 9 of 1994) and an Environmental Authorisation was issued by the Ministry of Environment, Natural Resources and Transport .Notwithstanding this gaps in the EIA Report were identified when reviewed against the EIA Terms of Reference provided by the IFC.

The EIA report is organised as follows:

- Chapter 1: Project Brief, Promoter, Legal Background;
- Chapter 2: Outline Description of Project and Utilities;
- Chapter 3: Initial State of Land Environment;
- Chapter 4: Initial State of Marine Environment;
- Chapter 5: Project Built Environment;
- Chapter 6: Economic Environment of Project;
- Chapter 7: Detailed and Quantitative Description;
- Chapter 8: Impact Assessment;
- Chapter 9: Environmental Management Plan; and
- Conclusions.

Given that the resort has an environmental authorisation and has been in operation for four years, it was decided to focus on *key* gaps in the EIA Report with a view to understanding the significance of those gaps in the day to day operation of the resort.

(a.i) Project Description

The Project description does not cover the full life cycle of the project with limited detail provided for the Construction Phase, Operational Phase, Decommissioning and Closure Phases. As the project activities are not well described, it is difficult to determine whether the impact assessment and mitigation section adequately address the impacts of the Project activities. A good example of this relates to water consumption. The EIA Report's determination of water demand excludes laundry water consumption, which is understood to be one of the major water users of the resort. Accordingly, the impact of the resort's water use is not well understood. Indeed, the impact of water abstraction on the water source is not assessed at all in the EIA Report.

(a.ii) Baseline Description

While the EIA Report does identify some baseline sensitivities (sensitive, important or protected plant and animal species, biodiversity hot spots, critical habitats), the baseline description, particularly with respect to where project activities had the potential to impact on key baseline sensitivities, is inadequately described. For example, baseline water and air quality is not described and turtle nesting locations and frequency of visits are not described. Furthermore, baseline sensitivities are not mapped.

(a.iii) Impact Assessment and Mitigation

The impact assessment and description of mitigation is not adequately addressed in the EIA Report. The following key points were noted:

- The methodology used to assess impacts is not described.
- The manner in which the significance of impacts was determined is not presented.
- Post-mitigation significance is not presented.
- It is not clear whether the impact matrix table presents significance of impacts pre- or post-mitigation.
- The list of impacts considered is not comprehensive enough (eg operational phase impacts on turtles not considered)

(a.iv)Environmental Management Plan and Action Plan

The EMP and Action Plan present a list of mitigation and monitoring activities that aim to address the impacts assessed in the EIA Report. While comprehensive, the EMP and Action Plan have not been fully implemented – i.e. Action Plan items D, F, I,J and K, page 83 of the EIA have not been implemented to date. With the exception of item I (environmental monitoring of emissions from the generators) the action plans items remain relevant and should be implemented. The relevance of implementing twice annual air quality monitoring for the generators is debateable given the scale of the likely impacts and availability of suitably qualified laboratory services in Seychelles – this issue is further discussed in the action Plan presented in Chapter 5.

What is the significance of these gaps?

Given that the baseline prior to construction is described to a limited degree, it is critical that day to day management of potential impacts are as effectively mitigated as possible. With regards to this it is important that monitoring of identified environmental sensitivities be implemented to establish the *current* baseline so that operational impacts from the resort can be better understood. The scope of the environmental baseline assessment should be established through consultation with local experts and be informed by the key operational impacts of the resort. Once established the baseline will provide an important reference for assessing ongoing potential negative or positive environmental impacts of the resort.

(b) Management Programme

The Environmental Management Plan (EMP) and Action Plan provided on pages 80 to 84 in the EIA provides for baseline monitoring and regular reporting to manage anticipated impacts. The EMP and Action Plan are currently not formally implemented by the resort. With respect to this no formal register of operational Environmental Health and Safety (EHS) impacts and risks exists, no documented evidence of mitigation activities and control procedures exists, no formal HSE management structure is in place to manage and mitigate potential EHS impacts and risks, no formal monitoring program is in place and no formal mechanisms are in place to engage and report to stakeholders on HSE performance. Notwithstanding this an annual programme of audits is undertaken by a government stakeholder group , comprising the Seychelles Licensing Authority, the Public Health Department, the Fire Safety Department, the Planning Authority, the Department of Environment and the Seychelles Tourism Board. The government delegation undertakes a site visit at least once a year and provides the resort with recommendations to improve its environmental, social and health performance. These audits are documented and inform the Seychelles Licensing Authority's decision to renew the resort's operating licence. A sample of these audit reports were reviewed by ERM and no major findings were reported.

What is the significance of this gap?

This gap is significant as presently day today environmental impacts and risks are managed / mitigated on an adhoc basis. Systematic management of key environmental risks and impacts not only provides a transparent and accountable means of tracking environmental performance it also has the added potential benefits driving down cost reduction (i.e. energy cost) and enhancing the resorts brand image.

It is not known whether the government delegation follows a systematic approach during their audits. In addition it is not known whether the same delegates attend the site audit each time. Having an Operational Phase EMP would allow the resort to have a co-ordinated, systematic approach to environmental and social management and would also provide the basis for a systematic audit by government.

(c) Organisation

The Labriz organisational structure does not define a role specifically to address environmental or social issues to implement the ongoing environmental and social management via the EMP or otherwise. Rather the recommendations from the government audits are provided to the Labriz General Manger who delegates tasks as required.

What is the significance of this gap?

Unless someone has the responsibility for implementing the EMP, environmental and social management is likely to be undertaken only on an *ad hoc* basis. Without organisational support, environmental and social performance can be compromised. When the responsibility for implementing the EMP is apportioned to one or more staff members, it can become a performance indicator used during staff reviews. This gives environmental and social performance added impetus.

(d) Training

There is currently no environmental training linked specifically an environmental management plan for the Resort. *Ad hoc* training on site. Training is linked to the Organisational structure. As no one on the organisation has the responsibility for environmental and social performance, the need to train personnel for their areas of responsibility has not manifested.

What is the significance of this gap?

Without training and an understanding of the need for environmental and social management, measures to implement environmental and social management may be undertaken in a haphazard or ineffectual manner. Training is especially important where the staff represent a wide range of cultural and social backgrounds with varying concepts of the business, financial or environmental drivers of environmental and social management.

(e) Community Engagement

EIA Engagement

According to the Director General of Wildlife, Enforcement and Permits, the EIA followed an acceptable public consultation process. However this process and its outcomes are not documented in the EIA Report.

Continued Engagement

It is not clear that the Resort has identified its stakeholder group or that it has established a means of engagement for communication and grievance purposes. Communications with the IDC staff village (which is the closest thing to a community on the island) occurs via the IDC Island Manager. The IDC Island Manager meets with the Labriz HR Manager and Security Manager once a month. This level of communication is deemed appropriate to address most issues that may arise. In addition, a social committee, comprising various island stakeholders meets on a monthly basis. This committee also serves as a forum for continued engagement with the IDC staff village.

What is the significance of this gap?

As the EIA public consultation process and outcomes where not described in the EIA Report, it is not known whether there were any issued raised during the public consultation process that would have had a bearing on the EIA. However, in light of the site visit and various interviews, it does not appear that there are dissatisfied members of the public who need to be communicated with. It is expected that there are no further significant issues other than those described in this report.

(f) Monitoring

As part of the requirements for the effluent "Authorisation to Discharge ", the resort monitors the treated effluent quality before it is discharged to sea. The Nature Protection Trust of Seychelles undertakes monitoring of the critically endangered sheath-tailed bat occurs via a 24hour camera in the bat roosting overhang. There is no formalised monitoring system for any of the other identified sensitive receptors (eg hawksbill turtles).

What is the significance of this gap?

Without monitoring, it is difficult to determine whether the resort's activities are improving or deteriorating environmental and social conditions within the area of its influence.

(g) Reporting

There is no formalised system of internal or external reporting of environmental performance or operation of the Resort.

What is the significance of this gap?

Without formal monitoring and reporting processes and systems the resort will be unable to transparently account for its environmental performance to internal and external stakeholders.

PS1-SUPPLEMENTAL ACTIONS
• Develop and implement an operation environmental management plan (along ISO 14000 lines) comprising of the following: o Register of environmental, health and safety operation risk and impacts; o Establishing key parameters to monitor for establishing a baseline; o Mitigation actions and procedures for material EHS impacts and risks; o Establish a clear management structure and reporting lines for the management of key EHS risks and impacts; o Formalise training for staff and education for guest on key EHS risks; o Develop key performance indicators to track EHS performance for key risks and impacts; o Engage stakeholders and establish formal reporting and grievance mechanisms

PS2
LABOUR AND WORKING CONDITIONS

THEMES
(a) Working conditions and Management of Worker Relationship, (b) Protecting the Workforce, (c) Occupational Health and Safety, (d) Non-Employee Workers, (e) Supply Chain,

PS2 -FINDINGS/ANALYSIS

There are presently 326 permanent staff members on site comprising 135 Seychellois and 191 expats. All local staff have contracts that are reviewed annually while all expat staff have contracts that are reviewed every two years. All matters related to labour and working conditions are governed by the Employment (Amendment) Act (Act 4 of 2006). Labriz's implementation of the Act is reviewed at least annually by the Employment Department of the Ministry of Employment and Human Resources Development. Training of Seychellois to fulfil roles held by expats is ongoing and is reviewed by the Employment Department. Labriz currently have seven Seychellois trainees for skilled positions, with four more arriving in February 2010. There are also currently four unskilled trainees in the employee of Labriz.

As part of an initial training programme, Labriz sent approximately 20 local staff to be trained at various resorts owned by Universal Enterprises. As part of its commitment to ongoing training, Labriz sponsors two local students for higher education in tourism every year. In addition, two employees are sent out to other Universal Enterprises' resorts every year for cross-exposure and learning.

(a) Working Conditions and Management of Worker Relationship

Human Resource Policy and Managing the Worker Relationship

Labriz does not have a supervisory Human Resource Policy that informs Labriz managers and supervisors how to implement Labriz's policies. However, all Labriz's human resource and labour policies are defined and described in an employee handbook. The employee handbook is comprehensive and covers everything from information on the culture and style of the resort to employment policies to policies on salaries, benefits and services. Employees are informed of their rights in terms of the Employment (Amendment) Act via the employee handbook. Apart from policies, the employee handbook also explains the grievance procedure, procedure for disciplinary action and the procedure for dismissal. The Employment Department of the Government of the Seychelles has produced a guideline document outlining the requirements for grievance procedures, work place disciplinary procures and minimum wage guidelines. The Labriz Employee Handbook procedures are in keeping with the guidelines provided by the Employment Department. Notwithstanding this a high level review of the National Employment Act and Regulations indicates that the maternity leave for employees is set at 12 weeks while the Labriz Employee Handbook indicates that staff are provided with 10 weeks of maternity leave.

What is the significance of this gap?

Not having a supervisory Human Policy increases the risk of inconsistently implementing Labriz's policies. This could in turn lead to grievances and potentially legal challenges.

Working Conditions and Terms of Employment

Working conditions and terms of employment are defined and described in the Employee Handbook and are compliant with the requirements of the Employment (Amendment) Act. Labriz provides reasonable working conditions and terms of employment to all employees.

Worker's Organizations

Seychelles Law allows for workers to join any trade union registered under the Industrial Relations Act (Act 7 of 1993). While Labriz does not prohibit joining any such union, interviews with staff indicate that the worker's union is largely defunct. In terms of the worker rights that a union would generally try to promote, Labriz clearly describes worker rights in the Employee Handbook. A review of the Employee Handbook and interviews with staff indicate that Labriz provides reasonable working conditions and terms of employment. Workers are also afforded the opportunity to appeal to the Ministry of Employment and Human Resources Development should they feel their rights or working conditions are unacceptable. Moreover, a staff welfare committee is in place to deal with issues related to welfare of the staff.

Non-Discrimination and Equal Opportunity

Labriz has a clearly defined non-discrimination and equal opportunity policy which is conveyed to all employees via the employee handbook. The policy conforms to the requirements of national law and international best practice.

Retrenchment

Labriz does not have a specific retrenchment policy or plan. However Labriz does commit to complying with all the requirements of the Employment Act. In this regard, termination of an employee's contract of employment is subject to a defined negation procedure with the union that the employee belongs to (if any) and the Employment Department.

What is the significance of this gap?

Having a retrenchment plan that is clearly communicated to staff minimises the risk of grievance procedures and/ or legal action.

Grievance Mechanism

The grievance procedure described in the Employee handbook is aligned with the procedure provided in the Employment Act. However, Labriz's grievance procedure can be augmented by including timeframes for responding to grievances as stipulated in the "Workplace Grievance Procedure" provided by the Employment Department. No specific guidelines are provided in the National Employment Act, the National Workplace Grievance

Procedure or the Labriz Handbook for confidentiality protection and non retribution.

What is the significance of this gap?

Clearly stipulated timeframes for lodging and responding to grievances minimises frustration and facilitates a quicker resolution to conflict. Including a clause in the employee handbook on confidentiality protection and non-retribution will enhance communication between employees and management.

(b) Protecting the Workforce

Child labour and forced Labour

Termination of employment procedures are well defined within the employee handbook (ref pg 14). The employee handbook does not make specific reference to forced or child labour, notwithstanding this the resort management indicated that child labour or forced labour is not used by Labriz, in accordance with the laws of the Seychelles.

(c) Occupational Health and Safety

Labriz has a health and safety policy in place. However this policy can be expanded to become more comprehensive and more pertinent to identified occupational health and safety issues associated with the different operating units of the resort. Some unsafe actions were noted during the site visit (related to inconsistent use of Personal Protective Equipment). In terms of health, a few anecdotal issues were raised by staff members (i.e. hygiene concerns about staff kitchen and ablution facilities). It is understood that the site does follow up on OHS incidents however it is not clear that there is a formalised procedures for reporting, investing and correcting OHS issue.

Labriz complies with the Silhouette Island Tsunami, Cyclone, and Flood Disaster Response Plan. It was noted in the report on the last emergency drill that a public address system or alarm was not installed. Installing such systems and communicating the alarm procedures to staff and guests alike would reduce response times to emergencies.

While staff are trained in the use of fire fighting equipment, it is unclear whether there is a fire response plan in place. Moreover, there is a small risk of external security threats as evidenced by the presence of pirates near Mahe Island last year. A procedure to address external security threats should be developed.

What is the significance of this gap?

Occupational Health and Safety can be improved through specifying health and safety measures for each operating unit, staff education and training and by regular auditing. This will minimise the risk of injuries or illnesses amongst staff.

Having emergency response plans and training staff in their implementation manages risks to employee health and safety.

PS2- SUPPLEMENTAL ACTIONS

- Develop a Human Resource Policy that informs management how to implement Labriz's various policies consistently.
- Develop a Retrenchment policy.
- Ensure all employees are aware of human resource and labour policies.
- Augment the Labriz grievance procedure to include timeframes for responding to grievances and clauses on confidentiality protection and non-retribution.
- Ensure staff are trained to implement policies.
- Develop a system of monitoring, recording and reporting on policy implementation.

PS3
POLLUTION PREVENTION AND ABATEMENT

THEMES

(a) Pollution Prevention, Resource Conservation, Energy Efficiency, (b) Waste, (c) Hazardous Materials, (d) Emergency Preparedness and Response, (e)Greenhouse Gas Emissions, (f) Pesticide use and Management, (g) Ambient Considerations

PS3-FINDINGS/ANALYSIS

(a) Pollution Prevention, Resource Conservation, Energy Efficiency

The following resort activities could potentially result in pollution occurring (whether through routine activity or from an accidental event):

- handling, storage and use of hydrocarbons;
- chemical storage and handling;
- pesticide handling and use;
- maintenance and operation of resort machinery (this includes generator sets, water pumps, desalination plants, effluent treatment plants etc);
- incineration of waste material;
- discharge of effluent to the marine environment;
- storage and handling of solid waste material;
- guest and staff leisure activities in the terrestrial and marine environments.

Presently key sources of pollution, pollution pathways and receptor sensitivity are not well understood on the resort. As a result no formalised mitigation and or abatement activities are implemented through a Resort level Environmental Management Plan. Notwithstanding this the Resort did display a good level of general house keeping with regards to issues of hydrocarbon storage and handling, effluent treatment, incinerator operation and solid waste handling. Areas for improvement include chemical storage and handling, managing runoff and possible spills from the maintenance yards.

Efforts to drive resource conservation on site were observed through use of co-gen technology on the villa cooling and water heating system, waste heat recovery from the generator facility for water heating, replacement of incandescent lamps with compact florescent lamps, planned waste heat capture project from the laundry facility and the upgrade of the effluent treatment plant which will result in a approximately 20% of the resort grey water being reused used for irrigation, toilet flushing and fire system. Coupled with this there are adhoc initiatives undertaken on a day to day basis to improve operational efficiency (i.e. reducing Villa cooling temperatures etc). Although large amount of water and energy data are collected daily the Resort has not established operational efficiency benchmarks for water, energy and waste.

In addition to the above the stores manager indicated that current procurement policies and procedures did not include eco-efficiency as screen when reviewing or selecting products for use on the Island (i.e. sourcing energy efficient products could be a long terms strategy to drive down energy use, sourcing biodegradable detergents may result in lower pollution risk etc)

(b) Waste,

Waste handling on site appears to be well managed with recyclables, hazardous and non combustible waste being stored and returned to the main island, while the garden refuse is stock piled on the Island and the remaining waste incinerated. An inspection of the incinerator area indicated that the area is well maintained and operated at optimal temperatures to ensure the destruction of volatile organic compounds. The incinerator is a double chamber facility with a direct system of venting to the atmosphere. No direct logging of incinerator temperatures is undertaken and no air quality testing is undertaken.

There is no inventory of hazardous or recyclable waste for the resort, and no records of waste volumes or waste manifest documentation exist. Coupled to this no formalised procedures for collecting handling, storing and disposing of waste exists for the site, the result is that the resort is potentially at risk from the uncontrolled realise of hazardous material into the receiving environment (i.e. storage of disused batteries and disused hydrocarbons in un-contained areas). Accordingly the report is unable to benchmark performance as a means of driving continual improvement.

(c) Hazardous Materials,

Hazardous materials are routinely used on the resort in the engineering, kitchen and laundry departments. Material safety data sheets for the respective hazardous chemical were observed, however standard operating procedures for their storage, handling and use was not available. In line with the requirements of the Montreal Protocol on Substances that Deplete the Ozone Layer the resort is presently phasing out the use of R22 air conditioning gas and replacing it with R404a gas.

(d) Emergency Preparedness and Response,

Emergency response equipment and procedures for spills or accidents related to hazardous materials were not available on site. Interviews indicated that while staff had a good level of intuitive understanding of the required emergency response actions, room exists for these procedures to be formalised and embedded into the training and management of staff.

(e) Greenhouse Gas Emissions,

Presently no green house gas reporting is undertaken on site, as a result it is not clear if the resort GHG footprint is below the performance threshold of 100,000 tons of CO2 equivalents per year. Energy efficiency has been incorporated into the design and operation of some aspects of the resort

operation (i.e. cogeneration at the Villa's and use of compact florescent light bulbs). Given the nature and scale of the green house gas emissions from the operation of the resort, the current activities related to energy efficiency and resource use minimisation are deemed to be appropriate. Using a stationary combustion conversion factor for diesel, an estaimated annual diesel consumption of 2,100,000 l annual – the annual carbon footprint of the resort is estimated at approximately 5,705 tCO_2e .

(f) Pesticide use and Management

Pest management is presently out sourced to a contractor based on Mahe. The contractor is a certified under the current licensing requirements of the Seychelles Government, all products used by the Contractor are authorised for use in the Seychelles by the National Department of Health. It is understood that approximately - 792 lts of **Cypermethrin** are used annually and 480 kgs of **Pestoff bait** and **Klerat.** Cypermethrin is classified as a Class II (Moderately Hazardous) product by the World health Organisation Recommended Classification of Pesticides by Hazard Class. Currently there is no Integrated Pest Management plan is in place however the client has worked with the pesticide contractor to limit the zones of pesticide application.

(g) Ambient Considerations

Impact on ambient conditions was considered during the project impact assessment however a formal baseline for ambient conditions was not established for air quality and surface water. Establishing these ambient baseline conditions will allow the cumulative long consequence of operation of the resort to be understood within the context of there operation within ecologically sensitive area.

Establishing an air quality baseline would be useful only if ongoing monitoring of air quality was likely to occur. In light of our discussions with the Ministry of Environment and the challenges around equipment and laboratory analyses, it is unlikely that ongoing air quality monitoring is feasible. However, it is possible to monitor certain indicators which would allow the Resort to determine whether air quality is deteriorating to the point that ecosystems are being affected. In this regard, it is believed that monitoring residents' health (monitoring for poor air quality-related illnesses), monitoring the pH of the main wetland, and monitoring of indicator species should give warning of deteriorating air quality. Indicator species can be determined in conjunction with specialists (possibly the endemic frog species high on the mountain slopes could be an indicator species).

What is the significance of this gap?

Managing pollution aspects of the resorts operations in a proactive and systematic manner through an environmental management system and ongoing monitoring will greatly reduce potential operational impacts on the receiving environment.

PS3-SUPPLEMENTAL ACTIONS

It is recommended that the following supplemental action are incorporated into the development and implementation of an environmental management program for the resort:

- Establish key sources of pollution, pathways and sensitivity of the receiving environment and as a basis for developing proactive mitigation actions for material sources of pollution and potential impact (i.e. hydrocarbon spills and run off from the maintenance yard into the fresh water system).
- Development of a hazardous waste management plan for the resort, that includes procedures for measuring and monitoring the amount of waste generated;
- Development of procedures for the handling , storage and use of hazardous materials on site;
- Related to item 1 above, development of emergency response procedures for pollution related incidents and accidents involving hazardous substances;
- Development of an integrated pest control management plan that incorporates the use of buffer zones, establishing action thresholds, action for target species, preventative actions and monitoring for bioaccumulation;
- In conjunction with the supplemental actions for PS6 it is recommended that the site establish ambient baseline conditions for fresh water and monitoring plans for key species.

PS4
COMMUNITY HEALTH, SAFETY AND SECURITY

THEMES
(a) Community Health, Safety and Security, (b) Emergency Preparedness and Response, (c) Security Personnel Requirements

PS4-FINDINGS/ANALYSIS

(a) Community Health, Safety and Security

General
The nature and scale of the resort's activities do not result in significant risks to the IDC Village in terms of health and safety or security. Moreover, Labriz maintains a fully equipped clinic for the benefit of the guests, staff and IDC Village. The IDC staff village is located approximately 1km from the heart of the resort facility and as such is not subject to any visual, noise or light related impacts.

Infrastructure and Equipment Safety
Not applicable.

Hazardous Materials Safety
Hazardous waste is stored at the jetty for collection and transport to Mahe Island. Treated effluent which has the potential to be hazardous is disposed of via sea outfall. IDC villagers do not come into contact with hazardous waste arising from the resort.

Environmental and Natural Resource Issues
Labriz does not affect the villager's access to any natural resource. Labriz shares a water source with the IDC Village. During the dry season, Labriz provides the IDC Village with water from the desalination plant.

Community Exposure to Disease
Health issues are regularly championed by the medical clinic which is staffed and equipped by the resort. Health drives and awareness campaigns occur regularly in the IDC Village. The operation of the resort is not likely to result in an increased risk of vector borne diseases.

Emergency Preparedness and Response
The Island has an emergency response procedure for tsunami, cyclone or flood disasters. The resort should develop emergency response plans for fire and external security threats.

What is the significance of this gap?

Having emergency response plans and training staff in their implementation manages risks to community health and safety.

(b) Security Personnel Requirements

Security staff are well trained and equipped to address day-to-day security issues on the resort. Roles and objectives, together with a short description of the means to undertake their responsibilities, are described in a security personnel briefing document.

It is not known whether security personnel are screened in the same manner in which other Resort employees are screened (ie employees undergo a security check and a police clearance certificate is issues before employment). In the interest of ensuring that security personnel are suited to their tasks, it makes sense that they follow the same police screening prior to employment.

Security staff receive training from the Seychelles police force with respect to conduct, how to undertaking an investigation/ enquiry and how to restrain a person if the need arose.

PS4-SUPPLEMENTAL ACTIONS

- Develop emergency response plans for fire and external security threats.
- Ensure staff are trained for their roles in an emergency.
- Hold regular drills.
- Ensure that all security personnel follow the same police clearance procedure as for other staff.

PS5 LAND ACQUISITION AND INVOLUNTARY RESETTLEMENT
THEMES **(a) Compensation and Benefits for Displaced Persons, (b)Consultation and Grievance Mechanism, (c) Resettlement Planning and Implementation, (d) Physical Displacement, (e) Economic Displacement, (f) Private Sector Responsibilities under Government-Managed Resettlement**
PS5-FINDINGS/ANALYSIS
No voluntary or involuntary resettlement was required for the establishment of the resort.
PS5-SUPPLEMENTAL ACTIONS
None

PS6
BIODIVERSITY CONSERVATION AND SUSTAINABLE NATURAL RESOURCE MANAGEMENT

THEMES

(a) Protection and Conservation of Biodiversity (Habitat**,** Modified Habitat, Natural Habitat, Critical Habitat, Legally Protected Areas, Invasive Alien Species), **(b) Management and Use of Renewable Natural Resources** (Natural and Plantation Forests, Freshwater and Marine Systems)

PS6-FINDINGS/ANALYSIS

Note the findings for PS6 are drawn from the summary report provided to ERM by the IFC Biodiversity expert – see Annex A for a copy of this report

(a) Protection and Conservation of Biodiversity

Habitat, Modified Habitat and Natural Habitat

Apart from the resort footprint, the IDC village and jetty area, much of the rest of the island comprises natural habitat with some alien invasive species (notably the Calice Du Pape , Albizia and Cinnamon trees, the Indian Mynah and the common house gecko). The nature of the resorts operations means that the potential for negative impacts on natural habitat is limited. Notwithstanding this the following were noted as potential sources for habitat impact:

- Accidental spills during storage, handling or use of hazardous materials ;
- Littering on the beach or island interior due to careless hikers;
- Emergency release of brine discharge from the desalination plant;
- Resort lighting and guest traffic on La Passe beach, which is nesting habitat for marine turtles;
- Pesticide use, in particular bioaccumulation in freshwater habitats of importance to sensitive and rare species.

On the positive side, the resorts construction and operation have improved the following habitats:

- The main wetland was rehabilitated, returning ecosystem functioning and facilitating the re-introduction of the endemic sub-species of terrapin.
- Various activities carried of the Nature Protection Trust of the Seychelles, a conservation NGO that is supported by the resort (e.g., restoration of habitat of the critically endangered sheath-tailed bat and monitoring of this species).

What is the significance of this gap?

Potential pathways for degradation of natural or modified habitat, if not managed, could result in a deterioration of habitat services. This could be particularly significant when habitat modification affects endangered or protected species (see "*Critical Habitat*" below).

Critical Habitat

Note this section is drawn from the IFC Biodiversity expert report that is available in Annex A. The entirety of Silhouette Island qualifies as critical habitat per Performance Standard (PS) 6 and would be considered the overall critical habitat "unit of measurement" (~20 km^2). The area containing the Labriz Resort and its immediate surroundings where resort-related activities take place (e.g., diving, ferry to Mahe, walking/hiking) are sited within this critical habitat designation. Per paragraph 9 of PS6, critical habitat criteria are being triggered within the immediate footprint area of the Labriz Resort and on the island at large (i.e. beyond the resort and its immediate surroundings). In addition to critical habitat, the legally protected areas clause of PS6 is also triggered.

The Silhouette Island and surrounding marine environment is considered to be a critical habitat as:

- The critically endangered Hawksbill Turtle nests on the island's beaches.
- The critically endangered Sheath-tailed Bat is found on Silhouette Island.
- Two critically endangered sub-species of mud turtle are found on Silhouette Island.
- There are numerous endangered and endemic plants on the island.
- The island is home to birdlife of international importance.
- An endemic frog species is found on the island.
- Several key ecosystem services are provided.

The main gap is that Labriz cannot demonstrate that there is no measurable impact on any of the abovementioned "triggers" of a critical habitat.

What is the significance of this gap?

The resort's area of influence does not affect the frog or bird species mentioned above. However, the resort's area of influence, including the resort's direct footprint, does extend to the Sheath-tailed Bat the terrapins and the Hawksbill Turtle. The resort would need to establish a baseline for some species and implement monitoring plans to determine potential impacts and implement measures to reduce impacts and/ or establish biodiversity

offsets. Please refer to the Action Plan in Chapter 5.

Legally Protected Areas

The marine area surrounding the island is a declared Marine National Park. In addition, approximately 93% of the island (excluding the footprint of the Labriz resort and IDC Village) is about to be declared as a National Park. While no management plans have yet been developed for the protected areas, the resort operations will have to be managed to minimise potential impacts and to be aligned with the protected areas management objectives. With respect to the Marine National Park, the resort does not allow motorised waters sports. The PADI diving centre on the island prohibits guests from touching or interfering with marine life during a dive.

Being that the resort is located within a marine park, they have the responsibility to abide by the Marine Park's management plan and where possible implement "additional program(s)" to further the conservation aims of the park. Although no management plan currently exists for this park, the resort has not identified any appropriate "additional program" to be implemented. This latter activity would require consultation with relevant stakeholders and biodiversity experts in the Seychelles.

Invasive Alien Species

During construction the resort kept a nursery of indigenous plants which were later used during rehabilitation and re-vegetation. Accidental introduction of alien invasive species is always possible and the resort complies with the requirements of the IDC in this regard. Known aliens species on the island are the Calice Du Pape , Albizia and Cinnamon trees, the common house gecko and the Indian Mynah. No gap was identified.

(b) Management and Use of Renewable Natural Resources

Natural and Plantation Forests

Not applicable; the resort does not harvest natural or plantation forests.

Freshwater and Marine Systems

The resort does not harvest fish or other aquatic or marine species. Freshwater from a natural spring in the mountain is used to supply the resort's and the IDC Village's water demand. The spring and resultant stream is one of a few tributaries of the Grande Riviere which flows out to sea near the resort. No study was done to quantify the stream's sustainable yield. Alex Bonnelam (the IDC Water and Sewage Supervisor) has indicated that the resort and village's water demand for most of the year still leaves a good supply of water which joins other sources in supplying the Grande Riviere. It was indicated that the spring's flow reduces for approximately three months a year such that it cannot supply the resort and village's

water demand. In this scenario, the resort operates its desalination plant. In the last four years of operation, this arrangement has not revealed any ecological impact on the Grande Riviere or associated riverine wetlands.

It appears that current operations do not have a significant impact on the ecosystem services provided by the Grande Riviere. However, the main gap is that there is no quantitative evidence to support this.

What is the significance of this gap?

Without defining the sustainable yield of the water source, it is difficult to determine when the resort and village's freshwater consumption becomes unsustainable.

PS6-SUPPLEMENTAL ACTIONS

- Build on, and formalise, existing monitoring activities to form a Biodiversity Monitoring and Management Plan as per the IFC expert opinion.
- Train staff to carry out the roles and responsibilities.
- Conduct guest biodiversity awareness campaigns.
- Comply with the management objectives of the Marine National Park and the Silhouette Island National Park.
- Implement a biodiversity offset for the hawksbill turtle.
- Implement an additional program for the marine national park.
- Refer to the Action Plan in Chapter 5 for more detail.

PS7 INDIGENOUS PEOPLES
THEMES **(a) Avoidance of Adverse Impacts, (b) Information Disclosure, Consultation and Informed Participation, (c) Impacts on Traditional or Customary Lands under Use, (d) Relocation of Indigenous Peoples from Traditional or Customary Lands, (e) Cultural Resources**
PS7-FINDINGS/ANALYSIS
There are no indigenous people impacted by the resort.
PS7-SUPPLEMENTAL ACTIONS
None

PS8 CULTURAL HERITAGE
THEMES **(a) Protection of Cultural Heritage in Project Design and Execution, (b) Project use of Cultural Heritage**
PS8-FINDINGS/ANALYSIS
(a) Protection of Cultural Heritage in Project Design and Execution No sites of archaeological, cultural or historic significance were destroyed during the construction of the resort. As part of the resort's operations, however, the historic Dauban Grande Case was restored and is currently used as a restaurant. Other culturally significant sites occur on the island. These include the Dauban Family Mausoleum, the cemetery and the Arabian graveyard. There are no direct interactions between the resort and these sites. Indirectly, guests of the resort who go for walks or hikes may come across one or more of these sites. **(b) Project use of Cultural Heritage** Not applicable.
PS8-SUPPLEMENTAL ACTIONS
• Engage with relevant cultural stakeholders to ensure that where necessary and or required that the appropriate communication is undertaken with staff and guest regards sites of potential cultural significance.

The following is a summary of recommended actions that the Resort should consider undertaking in order to ensure compliance with the Requirements of the IFC Performance Standards. The action plan is developed through comparing the resorts operations with the management plan in the EIA Report and via interviews with relevant government and scientific stakeholders. Actions were specified where:

- gaps exist between current operations and the IFC Performance Standard requirements;
- gaps exist between the requirements of the EMP in the EIA Report and current operations; and
- current mitigation or management measures can be improved.

Actions are categorised as 'recommended' or 'required' depending on the risk associated with non-conformance. Risks associated with those identified as 'required' have the potential for financial, environmental or social implications.

Table 4.1 categorises the actions according to the gaps identified with respect to the IFC Performance Standards. However, in order to simplify the action plan we have provided a high level summary of key actions that should be undertaken. In essence this relates to establishing a fully functioning Environmental Management System (some thing akin to ISO 14000) and undertaking baseline monitoring of key issues associated with potential biodiversity impacts.

Step 1a: Impacts and Aspects Register

Identify current and potential environmental impacts of Labriz as the basis for creating an Environmental Impacts and Aspects Register. Such a register forms the basis of an Environmental Management System and will clearly identify the resort's activities that have the potential to impact on the receiving environmental or social environment. Labriz will then be able to use the register to develop a systematic programme to address these potential impacts (see Step 2).

Step 1b: Determine current baseline and offset requirements

In order to determine potential long term impacts, it is important to determine the baseline against which future changes can be measured. In this regard, it is advised that appropriate monitoring is undertaken to reflect a full seasonal cycle for each of the following key biodiversity issues:

- Use of the Anse La Passe beach for turtle nesting;
- The population of Sheath-tailed Bats;
- Water quality of the wetlands;

- The population of Terrapins;

It is recommended that a scientific stakeholder group (i.e. Dr Jean Mortimer or Justin Gerlach and others) is established to assist in defining an appropriate method and approach to recording the baseline conditions for each of these sensitivities. This scientific stakeholder group should also assist the report in defining an appropriate offset program and additional program in the marine park associated with potential biodiversity impacts.

Step 2: Develop Environmental Operating Actions and Procedures

Use the Aspects and Impacts register to develop operational actions and procedures to mitigate the environmental impact that arise from the operation of the resort. These operational actions and procedures may include one off activities (such as developing hard standing and run off management for the maintenance areas) through to routine activities (tracking and reporting energy performance metrics at weekly management meetings). In order to provide a cohesive style to the management of environmental issues the Resort could consider the creation of an overarching environmental policy to guide the current and future environmental management of the resort.

Step 3: Organisational changes

Once a clear understanding of the origin of environmental impacts is understood along with the proposed mitigation measures, the next step is to embed the environmental management function within the management structure of the organisation. The use of environmental key performance indicators is a useful means of embedding environmental management responsibility into staff performance targets. The co-ordination of the environmental management program may require the creation of an environmental management post within the organisational structure.

Step 4: Monitoring and Reporting

Monitoring should comprise the following:

- Adhoc internal management monitoring of day to day activities that could give rise to environmental impacts (i.e visual inspection of wetland for litter, chemical stores);
- Day to day monitoring of key environmental performance criteria (i.e. Amount energy used, water quality, number turtles nesting etc);
- Long term impact monitoring of the key environmental sensitivities described in the baseline;

The above resort driven monitoring will also be supplemented by bi-annual monitoring audits undertaken by the Government of the Seychelles.

For each form of monitoring above the Resort should establish a means of recording and reporting the findings and supplemental actions. The resort should look at establishing a formal reporting and feedback mechanism on its environmental performance with key internal and external stakeholders.

Table 5.1 Action Plan

#	PS	Performance Standard Element	Action	Recommended or Required	Resource Requirements	Timing
1	1	Baseline Description	Appoint a team of marine experts to determine the nature of marine baseline study required with respect to the current turtle nesting activity on Anse La Passe beach and any other sensitive marine resources within the resort footprint. This may include as review and revision of the resorts current mitigation activities with respect to the marine habitat.	Required	External support - quote required	Immediately
2	1	Baseline Description	Study and describe water quality at wetlands in the vicinity of the resort (salt, hydrocarbons, phosphorous and nitrogen). Conduct water quality testing once in the wet season and once in the dry season. The baseline study could be undertaken by Alex Bonnelam.	Required	External support - quote required	Immediately
3	1	Baseline Description	Describe current status (population, breeding, habits, etc) of the Sheath-tailed bat. Liaise with Justin Gerlach to determine methodology for the baseline study.	Required	External support - quote required	Immediately
4	1	Baseline Description	Describe current status (numbers, breeding spots, habitat, feeding requirements) of both sub-species of terrapin. Liaise with Justin Gerlach to determine methodology for the baseline study.	Required	External support - quote required	Immediately
5	1	Impact Assessment and Mitigation	Develop Impact and Aspects Register to determine which aspects of the resort's operations have the potential to result in significant impacts. Thereafter develop measure to mitigate or mange potential impacts.	Required	External support - quote required	Immediately
6	1	Management Programme (Incorporating the required Organization, Training, Engagement, Monitoring, Reporting aspects)	Develop and implement an operational environmental management program (along ISO 14000 EMS lines) - See PS1 Supplemental Action for details	Required	External support - quote required	Immediately and ongoing
7	2	Human Resource Policy	Develop a supervisory Human Resources Policy	Recommended	Internal Resource requirement	
8	2	Human Resource Policy	Undertake training to ensure that all employees are aware of Labriz's human resource and labour policies. Keeping signed training records.	Required	Internal Resource requirement	Immediately and ongoing as new staff are employed

#	PS	Performance Standard Element	Action	Recommended or Required	Resource Requirements	Timing
9	2	Retrenchment	Develop a retrenchment policy	Recommended	Internal Resource requirement	Immediate
10	2	Grievance Mechanism	Augment the existing Grievance Procedure to include timeframes for lodging and responding to complaints. Also include clauses on confidentiality protection and non-retribution.	Recommended	Internal Resource requirement	Immediate
11	2	Occupational Health and Safety	Identify occupational health and safety issues within each operating unit and develop standards for each unit accordingly.	Recommended	Internal Resource requirement	Immediate
12	2	Occupational Health and Safety	Regularly audit and report on implementation	Required	Internal Resource requirement	Immediate
13	3	Pollution prevention	The following pollution prevention actions are required to be incorporated into the proposed Environmental Management Plan: • Establish key sources of pollution, pathways and sensitivity of the receiving environment and as a basis for developing proactive mitigation actions for material sources of pollution and potential impact (i.e. hydrocarbon spills and run off from the maintenance yard into the fresh water system). • Development of a hazardous waste management plan for the report; • Development of procedures for the handling , storage and use of hazardous materials on site; • Related to item 1 above, development of emergency response procedures for pollution related incidents and accidents involving hazardous substances; • Development of an integrated pest control management plan that incorporates the use of buffer zones, establishing action thresholds, action for target species, preventative actions and monitoring for bioaccumulation; • establish ambient baseline conditions for fresh water • install electronic temperature meters on incinerators • ensure incinerators are serviced every 6 months and that operators have the relevant training.	Required	External support - quote required	Immediate

#	PS	Performance Standard Element	Action	Recommended or Required	Resource Requirements	Timing
	4	Emergency preparedness and response	Develop an emergency response plan for fire and for external security threats	Recommended	Internal Resource requirement	Immediate
	4	Community exposure to disease	Liaise with the clinic to determine whether air quality-related illnesses are increasing.	Recommended	Internal Resource requirement	Immediate and ongoing
	4	Security personnel requirements	Ensure that security personnel go through police screening prior to employment	Required	Internal Resource requirement	Immediate
	6	Critical habitat	Establish Scientific Committee to guide the development of the required baseline assessments, on going biodiversity monitoring and offset program.	Recommended	Co-ordinated by an internal resource	
	6	Critical habitat	Implement ongoing monitoring of the Sheath-tailed Bat. Terrapins and Hawksbill Turtle nesting. Any deterioration in the baseline should be recorded and brought immediately to the attention of the relevant authorities. Expert opinion should be sought with regard to identifying possible causes and mitigation measures.	Required	Co-ordinated by an internal resource	Immediate and ongoing
	6	Critical habitat	Maintain the dune crest vegetation on Anse La Passe Beach and remove alien vegetation.	Required	Co-ordinated by an internal resource	Immediate and ongoing
	6	Critical habitat	Develop an biodiversity offset program through collaboration with an scientific working group (i.e implement a monitoring plan at the Grande Barbe beach)	Required	Co-ordinated by an internal resource	Immediate and ongoing
	6	Critical habitat	Comply with the Environmental Management Plans for the Marine National Park and the Silhouette Island National Park. As these management plans currently don't exist the Resort may consider support there development as an additional program.	Required	Internal Resource	Ongoing
	6	Use of renewable resources	Monitor and record the resort's water use and effluent disposal. This should be incorporated as an aspect of the Environmental management Plan and should include programs to reduce the resort water consumption.	Required	Internal Resource	Ongoing
	6	Use of renewable resources	Employ a specialist to determine the spring's sustainable yield	Recommended	External Resource	Once off – Immediate
	8	Protection of cultural heritage	Erect signage at sites of cultural or historic importance to inform visitors of "do's and don'ts"	Recommended	Internal Resource	Once off – Immediate

The following table provides an indicative timeframe for the development of the baseline determination discussed above.

Table 6.1 Timeframe for Baseline Establishment

Baseline Requirement	Start	End	Comment
Marine - Hawksbill Turtle Nesting on Anse le Passe *Establish nature and requirements of a marine baseline through discussion with Dr Jean Mortimer and Mr Justin Gerlach – this would include establishing what parameters to monitor and there frequency.*	Feb 2010	Dec 2010	The reason for a year's worth of data is to account for the full seasonal variations. The exact timeframe can be determined in conjunction with Dr Jean Mortimer.
Wetland Water Quality *Determine sample parameters in conjunction with Alex Bonnelam but should include at least tests for diesel, oil, phosphorous, nitrogen.*	Feb 2010	July 2010	Sample once in dry season and once in wet season
Sheath-tailed Bat Determine baseline in conjunction with Justin Gerlach Use data from current ongoing monitoring Establish breeding cycle, feeding habits, population estimates, area of habitat for both nesting and hunting, etc.	Feb 2010	July 2010	It would be useful to get Justin Gerlach to determine the baseline
Terrapins Determine baseline in conjunction with Justin Gerlach Use data from current ongoing monitoring Establish breeding cycle, feeding habits, population estimates, food sources, etc.	Feb 2010	July 2010	It would be useful to get Justin Gerlach to determine the baseline

It should be noted that ERM does not feel it necessary or practical to establish noise or air quality baseline monitoring for the following reasons:

- During the site visit, it was determined that noise is not a significant issue. The primary sources of noise are the power generators. These are however housed in their own building which provides an effective means of muffling noise. Furthermore there are no noise sensitive receptors (IDC village or staff accommodation) within close proximity to the generators. Accordingly, we do not believe establishing the noise baseline is required.

- Poor air quality does not appear to be a significant issue on the island. This view was confirmed during our interview with Mr Flavien Joubert (Directo-General, Wildlife, Enforcement and Permits). The government does not believe that monitoring air quality on the islands, where the only emissions are via incinerators, is beneficial. Rather, they focus their attention on big industry where emissions to air form a significant portion of the industries' operations. Given the lack of air quality monitoring equipment and the dearth of laboratories with the ability to analyze air quality samples, it is believed that establishing the air quality baseline would be impractical and unduly expensive relative to the benefit gained. Further development on Silhouette Island will be limited by the proposed Silhouette Island national Park and thus emissions via incinerators on the island are unlikely to increase dramatically. As a means of limiting potential air quality impacts, it is advised that electronic temperature meters be installed on the incinerators so to ensure that the furnace temperature remains above the required threshold.

Annex A

Labriz Biodiversity Report IFC

Site Visit to Labriz Resort / Silhouette Island / Seychelles
12– 15 January 2010

Subject: **Main Findings on Silhouette Island as Critical Habitat and Proposed Way Forward for Labriz Resort**

OVERVIEW

The entirety of Silhouette Island qualifies as critical habitat per Performance Standard (PS) 6 and would be considered the overall critical habitat "unit of measurement" (~20 km^2). The area containing the Labriz Resort and its immediate surroundings where resort-related activities take place (e.g., diving, ferry to Mahe, walking/hiking) are sited within this critical habitat designation. Per paragraph 9 of PS6, critical habitat criteria are being triggered within the immediate footprint area of the Labriz Resort and on the island at large (i.e., beyond the resort and its immediate surroundings). In addition to critical habitat, the legally protected areas clause of PS6 is also triggered.

Based on the information obtained in the Seychelles, Labriz could be positioned to meet the client requirements of both critical habitat and legally protected areas (paragraphs 10 and 11 of PS6). The implementation of additional mitigation measures on the resort site, the development of a biodiversity offset and the implementation of additional programs in the marine national park would be necessary.

CRITICAL HABITAT AND LEGALLY PROTECTED AREAS

Legally Protected Areas / Internationally-recognized Priority Biodiversity Area

*Note that the presence of legally protected areas (designated for biodiversity conservation) are also triggers for critical habitat. Other internationally-recognized designations for priority biodiversity areas (e.g., Ramsar sites, IUCN protected areas) would also trigger critical habitat.

- Currently, the only legally protected area of Silhouette is the **Marine National Park**, which extends around the perimeter of the island within the coastal zone. The Marine National Park is also an **IUCN Protected Area** (Management Category II). To date, there has been no Management Plan developed for the park, but its importance was acknowledged by the Director-General of the Ministry of the Environment (MoE) and by the CEO of the Island Development Corporation (IDC), the parastatal body responsible for managing Seychelles' islands.

- In the near future, the **MoE will gazette 93 percent of the land area of Silhouette Island as national park**. The only activities permitted in the park will be low-impact ecotourism. The area containing the Labriz resort will fall outside of the designated area.

- Other designated areas of importance (with no legal status) are as follows:

    - Silhouette Island qualifies an **Alliance for Zero Extinction (AZE) site** as it contains one of the last remaining populations of the Critically Endangered (CR) sheath-tailed bats. Sites that qualify for an AZE designation must contain 95

percent or more of the global population of a Critically Endangered or Endangered species. The Alliance for Zero Extinction is a membership organization of ~65 conservation organizations.

- The entirety of Silhouette Island is a **Key Biodiversity Area** (KBA) given the presence of IUCN Red-listed Critically Endangered, Endangered, Vulnerable species and endemic species. Key Biodiversity Areas are sites of global significance for biodiversity conservation recognized by The United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC), Birdlife International and Conservation International (CI) in addition to nine other organizations.

- Silhouette Island is also considered an **Important Bird Area** (IBA) as designated by Birdlife International.

- On a regional scale[1], the entirety of the Seychelles is located in an Endemic Bird Area (EBA) as recognized by Birdlife International (i.e., "Granitic Seychelles") and a Biodiversity Hotspot as recognized by Conservation International (i.e., "Madagascar and the Indian Ocean Islands").

Critically Endangered and Endangered Species

- The **sheath-tailed bat** (*Coleura seychellensis)* triggers **Tier 1 critical habitat** (95% of the population in a discrete management unit) per the Critical Habitat Project Guidance Note.

- A sub-species of the **yellow-bellied mud terrapin**, *Pelusios castanoides intergularis*, triggers **Tier 1 critical habitat** as one of the last remaining populations exist in the marshlands of La Passe (within Labriz footprint).

- A sub-species of the **East African black mud terrapin**, *Pelusios subniger parietalis,* also triggers **Tier 1 critical habitat,** although the population of this species is located on the opposite side of the island, near Grande Barbe.

- The **hawksbill marine turtle**, *Eretmochelys imbricata*, triggers **Tier 2 critical habitat** (habitat that supports the regular occurrence of a single individual of an IUCN Red-listed CR species) per the Critical Habitat Project Guidance Note. Although its preferred nesting site is Grande Barbe beach, nesting does regularly occur by a limited number of individuals at La Passe beach.

Endemic and Restricted Range Species

- There are several **frogs** of the ancient **endemic** family, Sooglossidae, present on Silhouette Island. One species may trigger **Tier 1 critical habitat** (95% of the population in a discrete management unit) per the Critical Habitat Project Guidance Note.

[1] Note that "regional-level" priority designations are less relevant to a critical habitat discussion, but are noted here for comprehensiveness.

Another species may trigger **Tier 2 critical habitat** (1 percent ≥ 95 percent of the global population in a discrete management unit).

- The presence of several endemic trees and an endemic plant as qualifiying critical habitat criteria is to be confirmed.

Unique Assemblages of Species

The presence of a regionally unique mist forest on Mt. Dauban and regionally unique coral reefs surrounding the island might trigger the unique assemblages of species criterion This is to be confirmed.

Key Ecosystem Services

The following key ecosystem services would trigger critical habitat:

- Coastal vegetation/dunes complex, which would be providing the regulating service of erosion and flood control, maintenance of marine shore line.
- Marshland vegetation/mangrove habitat, which would be providing the regulating service of erosion and flood control.
- The main freshwater source, which is a provisioning service of freshwater.
- Recreational and ecotourism value, which is a cultural service

The beneficiaries of all four services are the government of the Seychelles, the local IDC community and the Silhouette Labriz Resort.

Other – Scientific Value

Researchers on Silhouette Island have been re-introducing the two Critically Endangered subspecies of terrapin on the island for a number of years. The same researchers have also been contributing to the conservation of one of the last remaining populations worldwide of the sheath-tailed bat. The scientific value of these endeavors furthers the designation of Silhouette Island as critical habitat.

DIRECT / INDIRECT / POSITIVE IMPACTS

This section provides a summary list of potential direct, indirect and positive resort-related impacts for each of the above triggers.

- **Legally Protected Marine Park**: The resort prohibits the use of motorized water sports. There is one medium-sized ferry shuttle that makes limited trips to and from the island. The dive center is an internationally credited organization (on-site “ecocenter”), and instructs divers and visitors on the importance and sensitivity of marine life. Divers are prohibited from standing on, touching and/or removing marine life. It is doubtful that the resort (including dive center) is resulting in a measurable adverse impact to the marine park (although negative impacts are likely being incurred by unsustainable fishing by locals from Mahe Island, which are beyond the resort’s control).

- **Other Designated Biodiversity Priority Areas**: Silhouette Island has been designated a biodiversity priority area mainly for resources found in the mountainous rather than the

coastal zone. Guests of the resort sometimes partake in hiking of these areas. The resort provides informational material to guests on the sensitivity of the wilderness areas. Guests are informed that the removal of natural objects, including seashells, is prohibited. Anecdotal evidence suggests that there has been some accumulation of water bottles in the marsh areas and along hiking trails.

- **Critically Endangered Species**
  - The use of pesticides, and especially fogging near the marshland, might impact on the sheath-tailed bat and the two terrapin subspecies. Pesticide accumulation in the marshland might impact on the terrapin species by reducing habitat quality, and the use of pesticides could potentially be reducing the food source of the bat species as they are insectivores.
  - Solid waste accumulation (water bottles) might also impact on the habitat quality of the marsh.
  - The resort's water consumption might be reducing water availability in the marsh during the dry season.
  - Overall however, the resort is most likely having a net positive impact on the terrapins given the near complete restoration of the marsh habitat, which was a rubbish site before resort construction. The on-going research by resident scientists and the re-introduction of the terrapin has reportedly increased their numbers.
  - It is also likely that the resort is having a net positive impact on the sheath-tailed bat given the on-going research and habitat restoration near the cave roost site (removal of invasive species), which has reportedly increased bat numbers.
  - Regarding the hawksbill marine turtle, the prime nesting ground is Grande Barbe beach on the opposite side of the island. Nevertheless, a limited number of hawksbills nest on the beach at La Passe, and the resort is most likely having a net negative impact on this smaller population. The presence of tourists on the beach might discourage turtles from approaching the shoreline as the Hawksbill is a day nester. The presence of tourists might also disturb nests once established. Resort lighting is likely having some impact on the hatchlings' ability to navigate toward the ocean, especially near the main restaurant.

- **Endemic Species**: These species are found in the forested area of the island, beyond the resort's direct footprint. Although hiking takes place in the forested areas, the impact is likely negligible.

- **Unique Assemblages of Species**: Regarding the mist forest, same as above. Regarding the corals, same as the section on the legally protected marine park.

- **Ecosystem Services**
  - The resort has retained a 10-15 meter buffer zone of coastal vegetation/dune between the villas and the ocean. According to the discussions with some ecologists, this "set-back" zone will likely be sufficient in maintaining the integrity of the shoreline. Impacts on the shoreline due to climate change are predicted to be the primary concern in the long-term.
  - Regarding the marshland vegetation/mangrove habitat, the resort had restored this area during construction, which was formally a rubbish site. Restoration is considered a positive impact.

- Regarding freshwater sources, some improvements could be made to water efficiency (see ERM report).
- Regarding recreational and ecotourism value, the presence of the resort has improved upon this service. The resort's presence is considered a positive impact.

Other – Scientific Value
The resort supports the on-going research of two internationally-recognized scientists who have been based on site for many years (positive impact).

ACTIONS / WAY FORWARD

This section presents preliminary ideas on the actions needed to comply with Paragraphs 10 (critical habitat) and 11 (legally protected areas) of PS6. Further consultation with relevant specialists is needed to solidify recommendations.

- **Actions - Legally Protected Area**
  - In coordination with the Ministry of the Environment, IDC and the Labriz Resort, key stakeholders/experts should be convened to identify additional programs to be carried out in the marine park. Examples of additional programs include coral monitoring, a sustainable fishing program, patrol and enforcement of illegal activities, development of a park Management Plan, climate change research and/or mitigation, etc.
  - Additional programs must be agreed upon, including budget and responsibilities, before financial close.
  - Execution of the additional programs could be placed as action items in the Action Plan with timeline.

As mentioned on page three, our operation does not have any measurable negative impact, and in absence of any government regulatory body to control the Marine National Park, I suggest that we look at options that will be practically doable by the resort on their own. I suggest that we should put a simple program in place, where we can go around the island once every fortnight to check if any illegal activity in terms of fishing, destruction of marine life due to anchoring of any outside boats, etc. is happening. If any activity is noticed, then the same is reported to the concerned authorities immediately for a remedial action.

- **Actions - Critically Endangered Species**
  - Establish baseline and sensible biodiversity monitoring program for sheath-tailed bat and the two terrapin sub-species.
  - Design basic freshwater aquatic monitoring program for the marshland site, which should include metrics for pesticide accumulation.
  - Conduct assessment with pest manager, in coordination with bat specialist, to help reduce the amount of fogging near bat cave roost and/or identify measures to otherwise improve habitat quality / food source for this species.
  - Reduce solid waste accumulation in marshland area and hiking trails (post signage, provide further awareness-raising to staff/guests).
  - Assess water availability needs in marsh site, and design mitigation measures as needed, in consultation with terrapin specialists.

- Review all mitigation measures for sheath-tailed bat and terrapins with on-site specialists.
- Develop of sensitivity map of resort map for sheath-tailed bats, terrapins and marine turtles to help guide mitigation measures from related impacts such as effluents.
- Establish marine baseline in the footprint area of the resort.
  If you may please elaborate on the same, or probably give us more specifics to help understand what should be done

- Further on-site mitigation measures for hawksbill marine turtle. Examples include a designated person to conduct daily beach monitoring for turtles; demarcate nests as no-go areas; erect a shade barrier behind nests to shield the resort's lights from the hatchlings; translocate nests immediately after nesting to quieter, unlit beaches; conduct inspection of resort lighting. Note that training would need to be provided to individual carrying out turtle monitoring/handling activities.
- Convene key stakeholders/experts to identify a suitable biodiversity offset program for marine turtles. Examples include a turtle monitoring program, which would also help deter poachers; enhancement of habitat quality at Grande Barbe beach (if practicable / useful); and/or establishing Grande Barbe beach as a permanent no-go zone (less practicable as this would need to be a government initiative). A combination of offsets is also suitable.
- Biodiversity offset(s) must be agreed upon, including budget and responsibilities, before financial close.
- Execution of the offset could be placed as action items in the Action Plan with timeline.

- **Actions - Endemic Species**, **Unique Assemblages of Species**
  - None

- **Actions - Ecosystem Services**
  - Improvement of water efficiency - see ERM report

Annex B

PhotoLog

Photo 1 *Solid Waste Store near the harbour*

Photo 2 *Fuel Pump Station*

Photo 3 *View out to sea from the Silhouette harbour – maintained by the IDC*

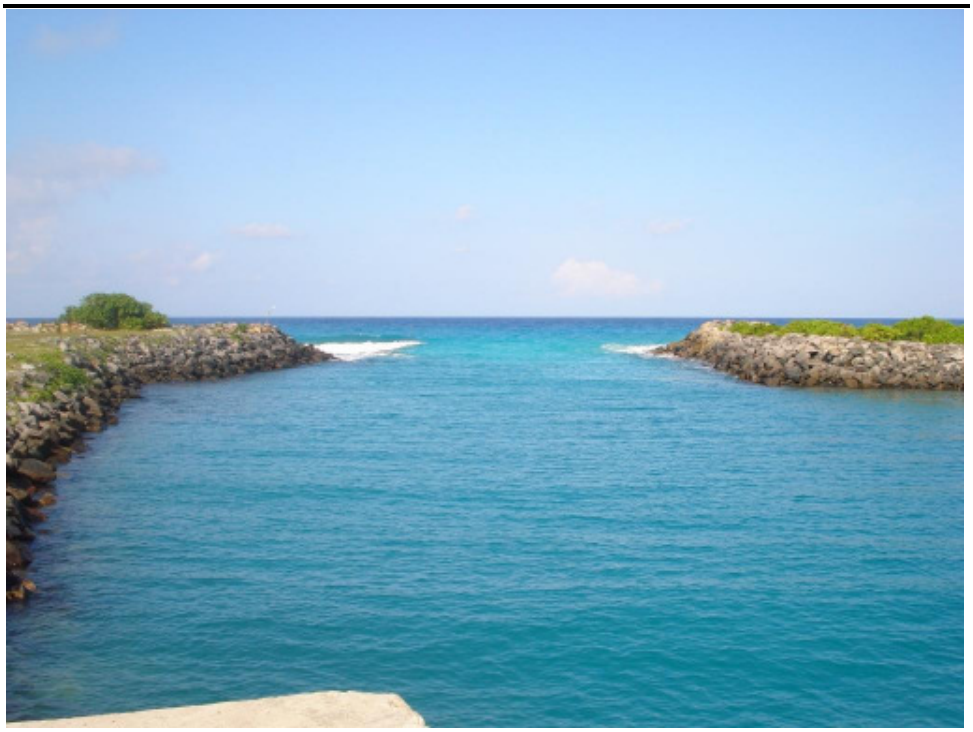


Photo 4 *Resort Welcome Jetty Facility*

Photo 5 *Potable Water Filtration and Pump room*

Photo 6 *Generator Exhausts*

Photo 7 *Laundry facility showing Ironing section*

Photo 8 *Dry Good Store*

Photo 9 *Blast Freezers and Cold Rooms*

Photo 10 *Offsite Chemical Store*

Photo 11 *Fresh and grey Water Storage Tanks*

Photo 12 *Sewage Treatment facility with maintenance roof in the background*

Photo 13 *Generator sets*

Photo 14 *Solid Waste Handling Area and Incinerator units*

Photo 15 *Close-up of one of the "Macro-burn" incinerators*

Photo 16 *Operator at the incinerator*

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Photo 17 *Reverse Osmosis Treatment Unit*

Photo 18 *Reverse Osmosis Treatment Room*

Photo 19 *Bulk Diesel Storage Area showing - 40,000l Above Ground tank*

Photo 20 *The Dauban family mausoleum*

Photo 21 *Fire-fighting equipment found at several locations on the Resort*

Photo 22 *One of the boreholes used to draw water for the desalination plant*

Photo 23 ***Plastic bottles separated out before incineration of waste.***

Plastic bottles are transported to Mahe.

Photo 24 ***Incinerator chimney stacks***

Photo 25 *Resort and IDC Village water source*

Photo 26 *Waiting room at the clinic*

Photo 27 *One of two patient rooms at the clinic*