

ENVIRONMENTAL IMPACT ASSESSMENT & ENVIRONMENTAL VALUATION



A DEVELOPER'S GUIDE

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CHANGE IN PLANS

Should a developer change the development plans after an Environmental Authorisation has been issued, the EAPS will review the situation and, if there are significant changes, they may suspend the authorisation and halt the development while the EIA is repeated (at the developers cost) to adequately incorporate the changes.

MONITORING

Development proposals that receive an Environmental Authorisation will have regular or scheduled site visits by the EAPS to ensure compliance with the conditions of the Environmental Authorisation. During such visits, additional supplementary measures may be recommended to mitigate impacts that had not been foreseen.

Post-development monitoring will also be carried out to determine the accuracy or degree of deviation from the original predictions with respect to environmental impacts, the possible reasons for any such deviations, and the extent to which mitigation measures have achieved their objectives.



In the case of a Class 1 EIA, the independent consultant's report will be included in this assessment. EAPS will check to see that the report conforms to the requirements of the Terms of Reference and provides adequate information regarding significant impacts and appropriate mitigation measures. The consultant's EIA report and the Environmental Valuation will then be made available for public comment at District Administration Offices and at the Department of the Environment at the Botanical Gardens, and their presence advertised in the Nation newspaper. In addition, the Environmental Valuation will eventually be made available on the web site of the Department of the Environment for on-line comment. For large developments, Public Meetings will also be held in the district of the proposed development to inform the public and gather comments and concerns. The comments made by the public will then be included with the other material for consideration in the approval process by the Department of Environment.

DECISION: AUTHORISATION OR REFUSAL

A decision about a project is made based upon the information and assessments developed in the preceding process. An Environmental Authorisation to carry out the proposed development will be issued with the appropriate conditions as deemed necessary. Should the development not meet the required environmental needs, a Refusal for Development will be issued by the Administrator (Department of Environment). There is a formal appeal procedure that can be followed by a potential developer should a refusal be issued.

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This guide is designed to assist property owners and developers to understand the Environmental Impact Assessment process and its importance in Seychelles. It has been developed under a project funded by the Mangroves for the Future Foundation (MFF), implemented by the Marine Conservation Society Seychelles (MCSS) and Green Islands Foundation (GIF), in conjunction with the Ministry of Environment and Energy.



Development in Seychelles is controlled by a number of Governmental acts and regulations. Some of these refer to the physical aspects of a development, such as the density of a development, while others relate to the potential effects that a development may have on the environment. To effectively safeguard Seychelles' environment, both terrestrial and marine, the Environmental Protection Act requires that an assessment be carried out to evaluate such risks; this is termed an Environmental Impact Assessment (EIA). To assist in this, a process of quantitative enhanced environmental valuation is now being conducted for all planning applications. This guide will take you through the EIA process in stages so that you can understand how it works and how your development can benefit from the Environmental Valuation system.

SCREENING

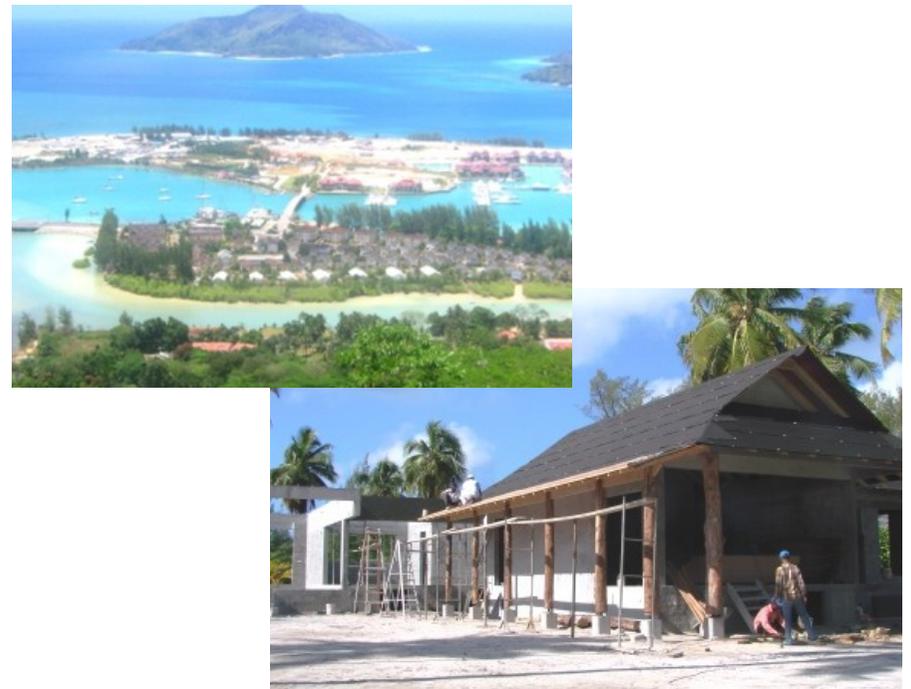
Once an application for a development has been received, it will be screened by Officers from the Environment Assessments and Permits Section (EAPS) of the Ministry of the Environment and Energy. This screening determines if the proposed development has potentially significant adverse environmental effects based on whether it will affect any area regarded as Sensitive or Protected.



IMPACT ASSESSMENT

Impact assessment involves evaluating the significance of the identified impacts, which are determined through professional judgement, changes to the Environmental Valuation score, reference to regulations, etc. The conclusions of the impact assessment will ultimately be used by decision-makers when determining the fate of the project application.

Negative impacts on the environment that are identified during the EIA process can be mitigated by various measures. These measures will become the Conditions on the Environmental Authorisation should the project be approved. For Class 2 EIAs, assessment will be undertaken directly by the Environment Assessments and Permits Section based on the results of their scoping study, site visit(s), and the Environmental Valuation.



SCOPING

Scoping is the process of deciding which of a project's possible alternatives and impacts should be addressed in the EIA. Scoping is carried out in discussions between the developer, the competent authority, relevant agencies and, ideally, the public, including parties interested or likely to be affected by the development.

In the case of a Class 1 EIA, direct meetings with the applicant will highlight critical issues and determine the Terms of Reference for an independent consultant EIA report (organised and paid for by the applicant). At the same time, scoping meetings with interested or affected parties will be held to ascertain their views on the development.

Following the scoping phase, all the relevant information on the current status of the environment gathered from the field studies, Environmental Valuation, and scoping exercises are compiled to act as a 'baseline' against which future impacts can be assessed.



INITIAL SITE VISIT

An initial site visit will be carried out by Officers from EAPS. This initial visit will allow the Officers to determine the type of habitats in the area of the proposed development and how these habitats are likely to be affected by the development. The Officers will also complete a field check-list to record information about the physical aspects of the property and surrounding area as well as any likely effects the proposed development will have on the surrounding area and neighbouring communities.

ENVIRONMENTAL VALUATION

The information recorded on the initial visit is used to develop an area-based score for each of the environmental habitats in the area affected by the proposed development. In cases of small residential properties, the 'Area of Interest' is usually the 'Parcel' of land and a small extended area surrounding it; in larger developments the area of interest can be much larger.



The unit scores for each habitat type are based on the results of field studies which incorporated assessments of provisioning, regulating, and social services. These scores are divided into three categories (high/medium/low) for each habitat type based on the habitat's current ecological status, which is determined during the initial site visit. For each habitat type, these unit scores are multiplied by the area each habitat occupies and combined with additional scores for special features, such as endemic species, producing the area score. The score for Infrastructure is based on the relative amount of area under construction or the number of beds a development contains:

| Biodiversity | High | Medium | Low |
|------------------------|------------------|----------|---------------|
| Area of infrastructure | Less than 10% | 10 – 50% | More than 50% |
| Number of beds | Less than 6 beds | 6 - 24 | More than 24 |

The sum of the area scores for each habitat type gives the Environmental Valuation score for the area under consideration *prior* to the development.

Based upon the area of the proposed new development and the expected impacts on the environments noted, a second analysis is performed of the expected Environmental Valuation *after* the development is completed.

On the following two pages are two examples which show how the environmental valuation scoring system works.



However, if a programme of rehabilitation is included in the proposal this can change significantly:

Example 4: The same development but including habitat rehabilitation as well as infrastructure development:

| Habitat | Status | Unit Score | Area m ² | Area Score |
|--|--------|------------|---------------------|-------------|
| Coastal Woodland | Low | 0.28 | 35 | 9.8 |
| Urban Grassland | Low | 0.22 | 45 | 9.9 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | Nil | 0.10 | 0 | 0 |
| Total Pre Development Score | | | | 19.7 |
| Standardised Area Score | | | | 0.25 |
| Coastal Woodland | Medium | 0.85 | 35 | 29.75 |
| Urban Grassland | Medium | 0.61 | 5 | 3.05 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | Medium | 0.05 | 40 | 2 |
| Total Post Development Score | | | | 34.8 |
| Standardised Post Development Score | | | | 0.44 |
| % Remaining Biodiversity Post Development | | | | 177% |

In this scenario the biodiversity score after development is in fact increased to 177% of the original, due to upgrading the biodiversity status of both the woodland and grassland areas. This would now not trigger a Class 1 EIA.



Not all developments have a negative impact on the environment and by including rehabilitation activities a development can improve the overall biodiversity as shown in the following examples:

Example 3: A development in an area of interest 80 square metres of low biodiversity and which currently has no infrastructure:

| Habitat | Status | Unit Score | Area m ² | Area Score |
|--|--------|------------|---------------------|-------------|
| Coastal Woodland | Low | 0.28 | 35 | 9.8 |
| Urban Grassland | Low | 0.22 | 45 | 9.9 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | Nil | 0.10 | 0 | 0 |
| Total Pre Development Score | | | | 19.7 |
| Standardised Area Score | | | | 0.25 |
| Coastal Woodland | Low | 0.28 | 35 | 9.8 |
| Urban Grassland | Low | 0.22 | 5 | 1.1 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | Medium | 0.05 | 40 | 2 |
| Total Post Development Score | | | | 12.9 |
| Standardised Post Development Score | | | | 0.16 |
| % Remaining Biodiversity Post Development | | | | 65% |

The biodiversity score after development in this case is 65%, thus a 35% reduction of the original, and would trigger a Class 1 EIA.

Example 1: A development in an area of interest 80 square metres which currently has only a very small amount of infrastructure:

| Habitat | Status | Unit Score | Area m ² | Area Score |
|--|--------|------------|---------------------|--------------|
| Coastal Woodland | Medium | 0.85 | 35 | 29.75 |
| Urban Grassland | High | 1.33 | 45 | 59.85 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | High | 0.10 | 5 | 0.5 |
| Total Pre Development Score | | | | 90.1 |
| Standardised Area Score | | | | 1.06 |
| Coastal Woodland | Medium | 0.85 | 35 | 29.75 |
| Urban Grassland | Medium | 0.61 | 5 | 3.05 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | Medium | 0.05 | 45 | 2.25 |
| Total Post Development Score | | | | 35.05 |
| Standardised Post Development Score | | | | 0.41 |
| % Remaining Biodiversity Post Development | | | | 39% |

Note that in this case the area under grassland has decreased while infrastructure (buildings) has increased by a corresponding amount; this causes the biodiversity grading of the infrastructure to decrease to the medium development level (20-50%).

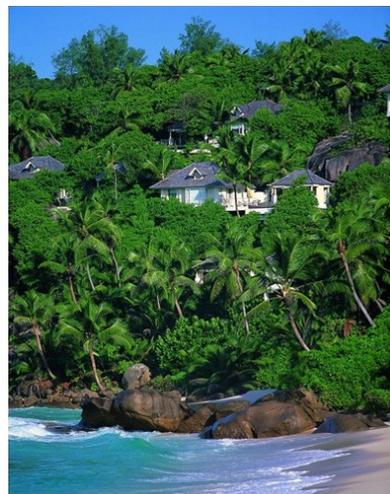
The biodiversity score after development in this case is 39% of the original, a decrease of 61%; any reduction in biodiversity greater than 33% would automatically trigger a Class 1 EIA.

Example 2: The same development with an area of interest 80 square metres but in an urban area which currently has a reasonable amount of infrastructure:

| Habitat | Status | Unit Score | Area m ² | Area Score |
|--|--------|------------|---------------------|-------------|
| Urban Grassland | Medium | 0.61 | 55 | 33.55 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | Medium | 0.05 | 25 | 1.25 |
| Total Pre Development Score | | | | 34.8 |
| Standardised Area Score | | | | 0.44 |
| Urban Grassland | Medium | 0.61 | 40 | 24.4 |
| Endemics | Nil | 0 | 0 | 0 |
| Infrastructure | Medium | 0.05 | 40 | 2 |
| Total Post Development Score | | | | 26.4 |
| Standardised Post Development Score | | | | 0.33 |
| % Remaining Biodiversity Post Development | | | | 76% |

Note that in this case the increase in the area under infrastructure (buildings) has not caused a change in the grading of the infrastructure (still not above 50% of the area) and thus the unit score for infrastructure remains the same.

In this example the biodiversity score after development is 76% of the original, so it would not trigger a Class 1 EIA.



EIA DETERMINATION

Often, the Environment Assessments and Permits Section will decide at the outset that the proposed development requires a Class 1 or Class 2 Environmental Impact Assessment (EIA) based upon its type and extent and whether it affects a Sensitive or Protected area. In some cases, the results of the Environmental Valuation and the information recorded on the field 'Check List' may prompt a review of this decision.

For smaller developments in areas which are not Sensitive or Protected, a Class 2 EIA is the probable outcome. This requires a site visit by an officer of the Environment Assessments and Permits Section; the initial site visit and subsequent Environmental Valuation may fulfil this requirement. However, if these have highlighted any issues, further site visits and scoping discussions with the applicant may be required. For larger developments and developments in Sensitive or Protected Areas a Class 1 EIA will be required.

