

**DRAFT**

**STRENGTHENING ENVIRONMENTAL IMPACT ASSESSMENT IN THE PACIFIC:**

**GUIDELINES FOR PRACTITIONERS**

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# Foreword

To be written after Guidelines content is finalised

# Acknowledgements

To be written after Guidelines content is finalised

# Disclaimer

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# Abbreviations

CBA – Cost-benefit analysis

CBD – Convention on Biological Diversity

CITIES – Convention on International Trade in Endangered Species of Wild Fauna and Flora

CMS – Convention on the Conservation of Migratory Species of Wild Animals

DP – Development proposal

EIA – Environmental impact assessment

EIS – Environmental impact statement

MARPOL - International Convention for the Prevention of Pollution From Ships

MEA – Multilateral environmental agreement

NGO – Non-government organisation

PICTs – Pacific Island Countries and Territories

SEA – Strategic environmental assessment

SPREP – Secretariat of the Pacific Regional Environment Programme

TOR – Terms of reference

UNCCD - United Nations Convention to Combat Desertification

UNCLOS – United Nations Convention on the Law of the Sea

UNFCCC - United Nations Framework Convention on Climate Change

UNEP – United Nations Environment Programme

# Glossary

*Adaptation:* adjustment in natural or human systems to a new or changing environment, so as to mitigate or avoid negative impacts. Climate change adaptation refers to anticipating the negative impacts of climate change and taking well-planned, early action to prevent or minimise the damage they can cause; or anticipating the positive impacts and taking advantage of opportunities that may arise.

*Baseline:* a description of pre-development or current environmental (including social and economic) conditions in a defined area.

*Climate change:* long-term changes in climate conditions, i.e. changes in the mean and/or the variability of a climate property such as precipitation, temperature or wind force. These changes persist for an extended period, typically a decade or longer. With climate change, disaster risks can change in terms of scale, scope, frequency and intensity.

*Cumulative impacts:* changes in the environment, in an identified area, resulting from the combined, incremental effects of past, present and future human activities, as well as environmental change processes (e.g. climate change) and physical events. The physical events can be of natural or human origin, and may include extreme weather events and natural disasters.

*Disaster*: severe, adverse disruption to the normal functioning of a community, society or ecosystem due to hazardous events interacting with vulnerable social and/or ecological conditions, which causes widespread human, material, economic or environmental losses.

*Environment:* encompasses environmental (natural and physical environment), social (people, culture, health, heritage, aesthetics, amenity) and economic aspects, as well as the relationships between these different aspects.

*Environmental assessment:* a term that covers both assessment processes referred to in this document, i.e. environmental impact assessment (EIA) and strategic environmental assessment (SEA).

*Environmental hazard:* an event or action that has the potential to cause significant impacts on a community, society or ecosystem. Environmental hazards can be natural (e.g. cyclone, flood, earthquake, tsunami, volcanic eruption, drought, landslide), human-induced (e.g. oil spill) or technological (e.g. infrastructure failure) in origin. They are not impacts (or disasters) in themselves but have the potential to cause them.

*Environmental impact assessment* *(EIA):* a two-way process for identifying and managing – (1) a development’s impacts on the environment, and (2) the impacts of the environment on a development, i.e. the impacts arising from environmental hazards and environmental change processes, including climate change. EIA also incorporates risk assessment; an evaluation of the consequences, probability and significance of identified impacts, in order to help guide environmental management.

*Environmental impact assessment report (EIA report) or environmental impact statement (EIS):* a detailed document that describes a proposed development project; the likely impacts the development will have on the environment; the likely impacts the environment will have on the development; the consequences and significance of those impacts; and ways to modify, mitigate and/or manage different aspects of the development so as to avoid or lessen negative impacts and enhance positive impacts.

*Exposure:* people, property and/or ecosystems that are present in hazard zones and hence subject to loss, disruption, damage or degradation.

*Green economy:* economic development that is based on the efficient use of natural resources and energy, and which minimises carbon emissions, waste and pollutant outputs, biodiversity loss and environmental degradation.

*Impact:* a negative or positive change in the environment as a result of an action, activity or event. Refers to the impact of a project on the environment, as well as the impact of the environment on a project due to an environmental hazard or environmental change process (including climate change). Examples of negative impacts include environmental degradation, loss of life or injury, property or infrastructure damage and social unrest. Examples of positive impacts include environmental recovery and restoration, increased food security, property or infrastructure improvements, and growth in local job opportunities.

*Multilateral environmental agreement*: an environment-related treaty, convention, protocol or other binding instrument between three or more states.

*Practitioner:* a participant in the environmental assessment process e.g. government officer; consultant; scientific or technical expert; community member or stakeholder.

*Proponent*: an individual, company or government ministry/department/agency planning to undertake a development.

*Resilience/resilient*: the ability of a community or system (human or environmental) to sustain itself; to respond to and recover from extreme events and disturbances; and to use extreme events and disturbances as an opportunity for renewal and positive transformation.

*Risk:* a measure of the consequences and probability (likelihood) of an impact. Risks arise from the interaction between environmental hazards and vulnerability.

*Stakeholder*: any person, organisation, institution or business who has interests in, or is affected by, a development issue or activity. Includes local community members and customary land/resource owners.

*Strategic environmental assessment*: a process that can be used in two main ways: (1) to assess the environmental assets, features, resources and values of a defined land and/or ocean area so as to establish a plan for sustainable and resilient development, or (2) to examine the potential environmental impacts of, and the environmental hazards and environmental change processes likely to impact on, government policies, plans and programmes.

*Vulnerability:* the sensitivity of a development, community or ecosystem to damage and loss resulting from a hazardous event or disturbance.

# 1.0 Introduction

Since the late 1980s the Secretariat of the Pacific Regional Environment Programme (SPREP) has been promoting the use of environmental planning and assessment processes amongst its member countries and territories. SPREP’s approach to environmental planning and assessment has been part of a global program for improving environmental management and supporting sustainable development. SPREP has been guided by regional and international multilateral environmental agreements (MEAs);[[1]](#footnote-1) the needs of its members; the advice of its collaborators, donors and regional partners; and now, green economy, climate change adaptation and disaster risk management considerations, with the latter two being amongst the most important sustainable development issues for the Pacific region.

Promotion of environmental assessment remains an important priority for SPREP, with a target in the organisation’s *Pacific Regional Environment Programme Strategic Plan 2011-2015* (Strategic Plan) to develop Pacific-related models for environmental assessment. Additionally, recent surveys and training workshops with SPREP member countries have revealed a need for environmental assessment capacity-building, particularly in the area of environmental impact assessment (EIA). This publication, *Strengthening Environmental Impact Assessment in the Pacific: Guidelines for Practitioners* (EIA Guidelines), has been produced to meet the Strategic Plan target, to address identified EIA capacity-building needs, and to update and build upon previous environmental assessment publications prepared by, or on behalf of, SPREP.[[2]](#footnote-2), [[3]](#footnote-3)

The EIA Guidelines aim to strengthen Pacific-based application of the EIA process by:

1. emphasising the importance of assessing the potential impacts of development on the environment *and* the potential impacts of the environment on development, especially impacts related to climate change and disasters;
2. providing a practitioner-focused overview of the EIA process, supported by an EIA toolkit;
3. highlighting the value of including risk assessment in the EIA process;
4. providing an introduction to strategic environmental assessment (SEA), a tool that can support EIA; and
5. linking the EIA process to MEAs.

The EIA Guidelines have been developed within the context of rapidly-changing Pacific land and seascapes. These changes are being driven by factors such as population growth; climate change; increasing urbanisation; and developments in Pacific-based economic sectors including fisheries, forestry, manufacturing, mining, tourism and transport. Developments in different economic sectors have the potential to provide substantial benefits for Pacific Island Countries and Territories (PICTs) by opening up new livelihood opportunities; facilitating access to international markets and foreign exchange; improving national and regional transport services/networks; and increasing the provision of goods and services that can raise standards of living. However, if the impacts of development are managed poorly and climate change and disaster risks are not considered throughout, these same developments can negatively affect Pacific lands, seas and lifestyles through natural habitat destruction and loss; generation of waste and pollution; release of greenhouse gas emissions; freshwater depletion; spread of invasive plants and animals; intrusion upon village communities and their lifestyles; damage to cultural heritage sites; and damage to or loss of physical infrastructure (e.g. buildings, bridges, roads).

Environmental impact assessment is a proactive planning and decision-making tool that has an important role to play in identifying impacts, assessing risks, and evaluating the costs and benefits of development projects[[4]](#footnote-4) *before* they are implemented. Environmental impact assessment aims to avoid adverse and costly changes in the environment and to development projects themselves, so as to strengthen positive development outcomes and resilience, and to ensure that development benefits are maximised and distributed as widely and equitably as possible.

# 2.0 Important environmental assessment concepts

## 2.1 Environmental Impact Assessment and Strategic Environmental Assessment

With reference to foundational work led by the United Nations Environment Programme[[5]](#footnote-5) and the Caribbean Community Secretariat [[6]](#footnote-6), SPREP defines two[[7]](#footnote-7) environmental assessment processes, applied at two different scales (Figure 1):

* **Environmental Impact Assessment (EIA)**, *project scale*– a two-way process for identifying and managing: (1) a development’s potential impacts on the environment, and (2) the potential impacts of the environment on a development, i.e. the potential impacts that may arise from environmental hazards and environmental change processes, including climate change. EIA also incorporates risk assessment, which involves an evaluation of the consequences, probability and significance of identified impacts, in order to help guide environmental management. Examples of development projects that may be subject to EIA include a new wharf, tourist resort, airport upgrade, renewable energy project, fish cannery, mining or logging operation.
* **Strategic Environmental Assessment (SEA)**, *policy, plan or programme scale* – a higher-level process that can be used in two main ways: (1) to assess the environmental assets, features, resources and values of a defined land and/or ocean area so as to establish a plan for sustainable and resilient development, or (2) to examine the potential environmental impacts of, and the environmental hazards and environmental change processes likely to impact on, government policies, plans and programmes. Examples of SEA application include the development and assessment of strategic land and ocean use plans; assessment of economic development plans and investment programmes for different sectors (e.g. energy, infrastructure, water resources, tourism, agriculture, mining); and assessment of national policies for different themes (e.g. climate change adaptation and disaster risk management, biodiversity conservation, waste management and pollution control).



Figure 1: Two environmental assessment processes, applied at different scales. The SEA process can help to inform the EIA process.

As mentioned in section 1, there is strong demand for EIA capacity-building amongst SPREP’s members; hence, these Guidelines are focused on strengthening the EIA process. A brief introduction is provided to SEA (section 4.5), to illustrate the relationship of the EIA process to higher-level environmental assessment and planning. Altogether, the two types of environmental assessment, EIA and SEA, provide a comprehensive planning and decision-making framework that works from the local to the national level, across different types of economic activity, and across the public and private sectors.

More specifically, SEA can establish a sustainable and resilient development context for EIA by identifying what forms of development are environmentally sound and appropriate; pinpointing locations where developments are/are not permissible; stipulating desired types and characteristics of developments; and identifying broad environmental management measures that need to be followed. For example, as shown in Figure 2, an SEA of a Tourism Development Plan SEA might result in guiding principles and standards to help beachfront developments avoid the impacts of climate change and natural disasters, and identify critical issues for the tourism industry that need to be considered during the EIA process for a new resort, e.g. groundwater drawdown, liquid/solid waste production and management, increasing tourism arrivals and associated impacts on village communities, appropriate set-back of buildings and infrastructure.



Figure 2: The SEA process can establish a context for sustainable and resilient development, which in turn, informs the EIA process.

## 2.2 ‘Environment’ in environmental assessment

Under EIA legislation in PICTs, the definition of **environment** typically covers environmental (natural and physical environment), social (people, culture, heritage, aesthetics, amenity) and economic aspects, as well as the relationships between these different aspects. This broad definition is particularly important in the Pacific context, with extensive customary land ownership and direct linkages between community livelihoods, subsistence lifestyles, natural resource conditions and sustainable and resilient development. Table 1 highlights some common environmental, social and economic issues that may be examined during the application of EIA and SEA in PICTs. Some of these issues are cross-cutting, however, for the purpose of tabulation they have been assigned to the most relevant column.

It is important that environmental assessments are individually customised to address the issues that are of most relevance to a particular development (EIA), or to a policy, plan or programme (SEA). Customisation usually occurs during the scoping phase, when terms of reference are developed for an environmental assessment (see sections 4.3 and 4.5). Non-customised environmental assessments are likely to be unnecessarily long and complex, and may provide limited useful information to inform the assessment and decision-making process.

Table 1: Examples of environmental, social and economic issues that may be addressed in EIA and SEA.

|  |  |  |
| --- | --- | --- |
| Environmental issues\* | Social issues | Economic issues |
| Native plants, animals, habitats and ecosystems | Public health and wellbeing | Livelihoods and employment |
| Invasive plants and animals | Cultural heritage values | Public/private sector financing and revenue |
| Ground, surface, marine water  | Public services, utilities and infrastructure | Resource extraction  |
| Soil and land resources | Population  | Industry development  |
| Pollution and waste (liquid, solid, gas) | Village settlements and housing | Costs and benefits distribution (between ‘locals’ vs ‘outsiders’) |
| Climate change and climate variability | Traffic and transportation | Land and sea tenure |
| Extreme events, natural hazards and disasters | Aesthetics | Global markets (imports, exports) |
| Genetic resources | Gender | Fair trade practices |

\*Includes biophysical environmental issues and environmental issues that arise from, or are linked to, human activities, i.e. issues that result from the relationship between people and the environment.

## 2.3 Risk assessment

As mentioned in section 2.1, the primary focus of the EIA process is identifying and managing a development’s impacts on the environment as well as the impacts of the environment on a development. To help determine which impacts need to be prioritised for environmental management, risk assessment should be incorporated within the process. Risk assessment evaluates the consequence, likelihood and relative significance of each identified impact and is used to help select appropriate environmental management and risk reduction measures. These management measures should mitigate, reduce or minimise impacts and facilitate sustainable and resilient development. Tool 4 (section 6) provides an example of a risk assessment approach that can be integrated into the EIA processes undertaken within PICTs.

# 3.0 History of Environmental Impact Assessment

EIA was first formally applied in the United States of America (USA) in 1970, with an aim of reviewing the environmental implications of proposed government developments.[[8]](#footnote-8) From the late 1980s onwards EIA awareness and application began to be widely promoted in regional and international multilateral environmental agreements (MEAs), to which many SPREP members are party, such as the Convention for the Protection of the Natural Resources and the Environment of the South Pacific Region (Noumea Convention); the Rio Declaration on Environment and Development (Rio Declaration); the Convention on Biological Diversity (CBD)[[9]](#footnote-9); and the United Nations Framework Convention on Climate Change (UNFCCC) (Box 1). In the years that have followed, EIA has been adopted and legislated by most countries around the world, and used to assess both public and private projects.

In the Pacific, project-scale EIA was initially introduced in association with Asian Development Bank and World Bank projects. During the 1990s and 2000s Pacific countries started to incorporate EIA into their national environmental policies and legislation. SPREP helped to facilitate the uptake of EIA by releasing educational publications and providing training and hands-on assistance (Box 2). All PICs, with the exception of two (Nauru and Niue), now have legislation in place that provides substantive provisions for EIA application (Appendix 1). However, despite the widespread adoption of EIA, a number of countries are still learning how to use the tool to maximum effect; especially within the context of staffing, financial and technical resource constraints and in terms of the need to address the potential impacts of the environment on a development, i.e. the impacts arising from environmental hazards and environmental change processes, including climate change.

**Box 1: Specific reference to EIA in MEAs**

*Noumea Convention (1986)*, *Article 16*: **Environmental Impact Assessment** 1. The Parties agree to develop and maintain, with the assistance of competent global, regional and subregional organisations as requested, technical guidelines and legislation giving adequate emphasis to environmental and social factors to facilitate balanced development of their natural resources and planning of their major projects which might affect the marine environment in such a way as to prevent or minimise harmful impacts on the Convention Area.

*Rio Declaration (1992), Principle 17*: **Environmental impact assessment**, as a national instrument, shall be undertaken for proposed activities that are likely to have a significant adverse impact on the environment and are subject to a decision of a competent national authority.

*Rio+20, The Future We Want (2012), 168*: We also commit to enhance actions to protect vulnerable marine ecosystems from significant adverse impacts, including through the effective use of **impact assessments**.

*CBD (1992), Article 14*: Each Contracting Party, as far as possible and as appropriate, shall: (a) Introduce appropriate procedures requiring **environmental impact assessment** of its proposed projects that are likely to have significant adverse effects on biological diversity with a view to avoiding or minimizing such effects and, where appropriate, allow for public participation in such procedures.

*UNFCCC (1992), Article 4*: All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall: Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example **impact assessments**, formulated and determined nationally, with a view to minimising adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.

**Box 2: SPREP’s EIA work in the Pacific region**

Since the late 1980s SPREP has provided EIA capacity-building and technical assistance for its members. This document builds upon this long-running assistance programme, along with other SPREP activities such as the:

* development and review of EIA legislation;
* delivery of in-country EIA training workshops, tailored to meet individual country needs;
* provision of independent advice and input to government agencies and donors for different stages of the EIA process e.g. project scoping, terms of reference preparation, review of EIA reports, and development of environmental management plans and project approval conditions;
* creation of the online Pacific Network for Environmental Assessment Practitioners (see Box 5);
* development of EIA templates for coastal tourism; and
* input into the Regional Environmental Management Framework for Deep Sea Mining, developed by the SPC-EU Deep Sea Minerals Project.

SEA emerged in the middle to late 1980s as a broader-scale environmental impact assessment process that aimed to address the increasing complexity of environmental issues and the need to consider the environment at every level of government planning and decision-making; and also to provide a strategic framework to support EIA application. SEA is a tool that is constantly evolving, being adapted and applied in modified ways to suit different policy and planning contexts in different parts of the world.[[10]](#footnote-10) A number of countries now have formal policies or laws in place that provide for the application of SEA e.g. European Union member states, Australia, Canada.[[11]](#footnote-11) SEA is yet to be widely adopted by PICTs but examples of its application include: *Strategic Environmental Assessment (SEA) Report: Neiafu Master Plan Vava’u, Kingdom of Tonga* and *A Strategic Environmental Assessment of Fiji’s Tourism Development Plan.* [[12]](#footnote-12),[[13]](#footnote-13) It will be important for future SEAs in PICTs to consider how environmental hazards and environmental change processes are likely to affect the implementation of government policies, plans and programmes, to help establish a framework for resilient development.

# 4.0 Environmental Impact Assessment in practice

## 4.1 What is the EIA process?

EIA is the primary, proactive decision-making process available for the environmental assessment and management of individual developments. Its application is supported and legislated in most PICs (Appendix 1). EIA is used to identify, predict and assess the impacts associated with individual development projects *before* implementation, in other words, *before* project construction and operation. Effective EIA focuses on addressing both the *negative and positive impacts* likely to arise from a proposed development and it identifies management measures to avoid or mitigate the negative and to enhance the positive impacts. Negative impacts might include the production of liquid waste and pollution of local waterways; destruction of natural habitat and loss of native species; increased traffic and congestion on local roads; drawdown of local water supplies, threatening water security; and increased dust and noise, affecting the health and comfort of local villagers. Positive impacts could include increased taxes and revenue for government; increased employment and training opportunities for local villagers; or provision of improved infrastructure such as a new wharf, bridge or road.

EIA is also an increasingly important tool for examining the potential impacts of the environment on development projects, (including impacts arising from climate change, climate variability and disasters), and for identifying appropriate adaptation or risk reduction measures to avoid or mitigate these impacts. The EIA process, therefore, is applied in two ways, to assess and address: (1) a development’s impacts on the environment; and (2) the environment’s impacts on a development.

Two important outcomes of the EIA process are: (1) the preparation and implementation of an environmental management plan (EMP), which includes management measures for addressing the identified, potential impacts; and (2) the establishment of a framework for measuring and monitoring environmental performance over the lifetime of a development, to ensure that better environmental outcomes are actually achieved.

The overall goals of the EIA process are to:

* maximise or strengthen positive development impacts;
* minimise, mitigate or compensate for negative development impacts;
* reduce vulnerability to environmental hazards and environmental change processes, and in turn, increase development sustainability and resilience; and
* ensure the benefits of development are distributed as widely and equitably as possible.

## 4.2 Why should Pacific Island Countries and Territories use the EIA process?

Most SPREP member countries have EIA regulations, thus, EIA is a compulsory part of their development planning and assessment processes. In the Pacific the EIA process is commonly applied or triggered as a legal requirement for gaining development approval, e.g. in the form of a development licence or permit; or at the request of funding agencies and financial lending institutions who seek to encourage sustainable and accountable development.

There are five key benefits that can arise from the effective use of EIA – for government, proponents and the community. These benefits are outlined below:

1. Early identification of environmental constraints, impacts, hazards and change processes

The EIA process promotes early identification of environmental constraints, impacts, hazards and change processes; and it encourages development modification, during the planning stage, to address them. Ultimately, EIA can result in an improved project design that is better suited to both the local environment and to project beneficiaries; that supports project sustainability and resilience; contributes to smoother project construction and operation; and allows for the avoidance of unnecessary expenses e.g. environmental fines; environmental clean-up or remediation costs. When a project is well-suited to the environment, when its vulnerability to hazards and environmental change is minimised, and when it is operating efficiently and effectively, a proponent will gain the greatest possible value from project investment, while government and the community will gain the greatest possible value from project development.

1. Provides clear operating guidelines

The EIA process, when applied in line with a country’s EIA legislation, provides clear operating guidelines for government, proponents and the community. It supports rigorous and consistent impact assessment, transparent decision-making and good governance.

1. Gives certainty to all stakeholders

EIA can give certainty to all stakeholders because it sets environmental performance and management standards that must be met. In other words, proponents know what levels of performance and management they are expected to adhere to, government knows what levels of performance and management it must regulate to, and ultimately, the community knows what level of project safety, environmental protection and socio-economic benefits to expect.

1. Ensures community buy-in and use of local knowledge

EIA can help to ensure community buy-in for a project by inviting public participation in development planning and assessment, and by requiring proponents to recognise and address community concerns. If community concerns are addressed at an early stage, proponents are more likely to avoid major objections, as well as delays in project implementation or disruptions to project operation. Effective public participation also provides an opportunity for local knowledge to be integrated into impact assessment, which can contribute to more robust and resilient project design and the development of locally-relevant environmental management measures.

1. Demonstrates commitment to national policies and legislation and regional/international MEAs

Effective use of EIA allows PICT governments to show they are meeting their environmental governance commitments under their national environmental policies and legislation, and also under regional and international MEAs. This is because EIA encourages the inclusion of matters such as waste management and pollution control; biodiversity conservation; sustainable land management; and climate change and disaster risk management in development planning, assessment and decision-making. If these core matters are effectively addressed through EIA, governments will be more likely to attract smart investment – especially investment that supports sustainable and resilient development.

## 4.3 Step-by-step EIA process

In PICTs the EIA process is typically administered by one government agency (e.g. the environment department) while development consent is granted by the ‘approval agency’ that holds jurisdiction or control over the type of activity under assessment. For example, in the case of a new hydropower facility the EIA process might be managed by the environment department while the development approval is issued by the department responsible for government utilities and infrastructure. In the case of a new harbour development the environment department may manage EIA while the development approval is granted by the ports authority.

A generic EIA process is described step-by-step in this section so as to provide general guidance for EIA practitioners (see Figure 3, Table 2). It is important to refer to the legislation and regulations of individual countries for specific direction on how EIA should be conducted – including the types of developments that are subject to EIA; required EIA steps and procedures; process timeframes; and the roles, authority and responsibilities of government Ministers, government agencies, development proponents and other stakeholders.

These EIA Guidelines highlight general principles for effective EIA in the Pacific, recognising that in practice, EIA will be applied differently from one jurisdiction to the next depending on governance structures, resourcing levels, and government assessment and enforcement capabilities. Using the EIA Guidelines as a reference point, PICTs are encouraged to develop their own EIA flow-charts and step-by-step process descriptions to provide clear, nationally-relevant guidance for their EIA practitioners.

**Box 3: Distinction between EIA and EIA report/Environmental Impact Statement (EIS)**

EIA: the *process* followed by government agencies, the proponent and stakeholders to assess the potential environmental impacts of development projects and the hazards and environmental change processes likely to affect projects. The EIA process is also concerned with identifying and monitoring management measures to reduce negative impacts, enhance positive impacts and improve project resilience.

EIA report/EIS: the *document* prepared by the proponent (or their consultant) as part of the EIA process, which details the type of project, its timeframe and scale, likely impacts, risk assessment of key impacts, proposed impact mitigation measures (for negative impacts) and optimisation measures (for positive impacts). In some PICTs the document is called an EIA report while in others it is called an Environmental Impact Statement (EIS). Throughout these Guidelines it will be referred to as an EIA report. The EIA report is reviewed and commented on by government agencies, the local community and other interested stakeholders (where legislation permits), as described in Table 2.



Figure 3: Outline of a typical EIA process, colour-coded to highlight the different paths that can potentially be followed. The term ‘stakeholders’ includes the local community and customary land/resource owners.

Table 2: Step-by-step EIA process (this will be formatted as a pull-out table that can be read alongside Figure 3)

|  |  |
| --- | --- |
| **STEP IN PROCESS** | **DESCRIPTION** |
| **DEVELOPMENT PROPOSAL SUBMITTED** | * A typical EIA process begins with the approval agency or proponent submitting a development proposal to government, usually to the EIA administrator.
* The proposal should outline the type, scale and location of the development; the proposed development timeframe (including construction, operation, and closure/rehabilitation, where relevant); known or potential impacts the development will have on the environment; and potential impacts the environment will have on the development.
* The initial proposal provides an overview, rather than comprehensive details. It should be regarded as a ‘work in progress’, to be progressively expanded upon, modified and improved as a result of EIA feedback and investigations.
 |
| **DEVELOPMENT PROPOSAL SCREENED****Refer to Tool 1: EIA screening checklist** | * Screening is the preliminary assessment of a proposal to determine if an EIA is required.
* It is usually led by the EIA administrator in consultation with other government agencies, local communities, local land/resource owners and other stakeholders where relevant, and where consultation is permitted under legislation.
* In some countries this step may involve the proponent preparing and submitting a Preliminary Environmental Impact Assessment or a Preliminary Environmental Assessment Report to the EIA administrator.
* The EIA administrator’s screening decision is usually made on the basis of answers to a set of standard questions that evaluate the size, scope, technical complexity, physical/environmental location, and social setting of a project, and any relevant legal matters. See Tool 1 for a screening checklist with example questions.
* During screening it is important to consider if the development’s potential impacts on the environment and the potential impacts of the environment on the development are likely to be significant, and if they require further investigation. Questions such as the following can assist with determining if impacts will be significant:
* what number of people will be affected and in which area?
* what types of plants and animals will be affected, over what area, and what proportion of their populations?
* will the impacts on people, plants and animals be short-term, long-term or irreversible?
* what proportion of a natural resource will be damaged, extracted, harvested or consumed?
* Screening is primarily a desk-based exercise, however, it is important the EIA administrator is familiar with the proposed project location, and the climate change and disaster risks and communities and most closely associated with that location, to ensure that screening accounts for locally-significant issues.
* Sometimes EIA administrators can refer to a list of ‘development activities’ or ‘activity classes’ prescribed under regulation, to help them determine which types of development should be subject to the full EIA process.
 |
| **EIA REQUIRED****or** | * Following screening the EIA administrator informs the approval agency and proponent about the course of EIA action to be taken. If an EIA is deemed necessary, the next step is proposal scoping.
 |
| **EIA NOT REQUIRED** | * If an EIA is not required the development can be actioned by the proponent, who may choose to implement their own environmental management practices as part of good project management. The approval agency may also stipulate environmental management conditions that need to be followed.
 |
| **DEVELOPMENT PROPOSAL SCOPED AND TOR DEVELOPED AND FINALISED****Refer to Tool 2: Terms of reference template** | * Scoping is about determining the spatial extent and subject content of an EIA report, identifying the range of potentially interested or affected people/groups, and prioritising the most significant impacts that will require the greatest attention in the report, so government decision-makers can make well-informed decisions about project approval and ongoing project management.
* Scoping is usually led by the EIA administrator with the support of other government agency staff, the proponent and relevant stakeholders. Regional organisations with specialist knowledge may also be called on to provide assistance. Through involving multiple stakeholders in scoping, the EIA administrator can be more confident that the EIA process will address all key development assessment and environmental issues.
* The outcome of scoping is a set of terms of reference (TOR) that outline the required content and provide advice on the format, of an EIA report (see Tool 2 for a TOR template).
* Sometimes the EIA administrator may hire a consultant to develop the TOR, especially for projects that are large, technically complex, and/or a new form of development. Depending on legislative provisions, the costs associated with engaging external consultants for EIA scoping (or other stages of the EIA process) may be paid for by the proponent or they may be borne by government.
* Typically, draft TOR are developed first and these are reviewed by the approval agency, proponent and sometimes other stakeholders, before being finalised.
* During scoping it is useful to consider objectives and targets within relevant national or local policy documents (e.g. national environmental management strategies, national sustainable development plans, climate change adaptation plans or joint adaptation and disaster risk plans, strategic land use plans), so the EIA process is directly linked with broader-scale environmental assessment and planning.
* It is important clear TOR are developed so the proponent understands what they must deliver on and so the EIA report is not ‘cluttered’ with unnecessary information that sheds little light on the most important issues. Clear TOR can also guide the EIA administrator when they are reviewing the adequacy of a proponent’s EIA report, and they may become an important point of reference if a legal challenge is made at later stages of the EIA process, or after a development commences. Additionally, clear TOR can assist with the development of project monitoring and evaluation indicators, following project approval.
 |
| **EIA REPORT PREPARED****Refer to Tool 4: example risk assessment approach** | * The EIA report is often prepared on behalf of the proponent by a consultant or a multidisciplinary consultancy team, especially in the case of large-scale and/or complex projects (e.g. an open-cut mining operation; a new harbour development; a new landfill facility). With smaller projects the EIA report may be prepared in-house by staff with relevant technical expertise (e.g. a government transport agency might prepare the EIA report for a new bridge or road).
* The EIA report is added to and developed iteratively throughout the EIA process. Communication between the proponent and the EIA administrator is important during report preparation to ensure the document adequately addresses the TOR and any additional issues or concerns that arise during later stages of the EIA process.
* The EIA report should have a clear focus and structure; concentrate on key impacts that are most important to stakeholders (within reason); and clearly present a comprehensive assessment, conclusions and recommendations on how and where to improve the project so as to support government’s decision-making process.
* Issues, topics and themes typically covered in an EIA report include:
* a detailed outline of the development activity across its full life cycle, from construction to operation, through to decommissioning, closure and rehabilitation (if appropriate);
* a description of the baseline environment, i.e. the pre-development environment. This description should be relevant to the development site and its surrounding area, rather than be broad and generalised;
* the purpose of and need for the development;
* consideration of possible project alternatives, i.e. different location, processing, design and scheduling options;
* prediction of the extent and magnitude of positive and negative environmental impacts likely to result from the project (this should include social and economic impacts, as per the definition of environment in section 2.2);
* assessment of environmental hazards and environmental change processes likely to impact on the project itself;
* a risk assessment that evaluates the consequence, likelihood and significance of each identified impact and which helps to determine which impacts need to be prioritised for environmental management (see Tool 4 for an example risk assessment approach);
* description of draft environmental management and mitigation measures to avoid, minimise or reduce the severity of negative impacts and optimisation measures to enhance positive impacts. These measures should address both the impacts of the project on the environment and the impacts of the environment on the project;
* demonstration of compliance with relevant government legislation, regulations and policies, including customary laws;
* an overview of public consultation undertaken during the development of the EIA report; and
* a list of all persons who prepared, and a copy of the TOR that guided the preparation of, the EIA report.
* The EIA administrator may also request that the EIA report include an assessment of how the project aligns with international agreements, covenants or treaties (i.e. MEAs) to which the government is a signatory.
 |
| **EIA REPORT SUBMITTED AND REVIEWED****Refer to Tool 3: EIA report review template** | * The proponent submits the EIA report to the EIA administrator for review. By this stage of the process the EIA report has generally undergone a series of revisions so that it is a near complete document. Sometimes additional information or clarification may be requested from the proponent, to enable a thorough review of all aspects of the development proposal.
* EIA report review is led by the EIA administrator who will often establish a committee to help them undertake the task (see section 5.2). The review step typically involves:
* evaluating the comprehensiveness and accuracy of the EIA report to ensure it adequately addresses the TOR, uses appropriate assessment and predictive tools, and has arrived at valid conclusions;
* reviewing environmental (including social and economic) impacts likely to arise from the project; and assessing the comprehensiveness and likely effectiveness of proposed mitigation measures (for negative impacts) and optimisation measures (for positive impacts);
* reviewing environmental hazards and environmental change processes, and the potential impacts these may have on the project itself; and assessing if the proponent’s proposed mitigation measures will be adequate to ensure project safety and resilience;
* determining which negative impacts cannot be avoided or minimised, often termed ‘residual’ impacts, and whether these residual impacts are considered acceptable by affected stakeholders;
* determining what monitoring and reporting will be required, to establish whether the development has achieved environmental compliance; and
* considering relevant national or local policy documents (e.g. national environmental management strategies, national sustainable development plans, climate change adaptation plans or joint adaptation and disaster risk plans, strategic land use plans) as well as any relevant SEAs, to ensure the proposed development is aligned with broader planning and policy frameworks.
* EIA report review can be assisted by the use of an evaluation sheet that lists criteria from the screening and scoping steps and questions about key environmental impacts and issues, and which provides a response column where reviewers can write their judgements and opinions about different sections of the EIA report (Tool 3).
* A timeline for the review period is normally specified in legislation and it is important this is followed so the EIA process runs smoothly.
* Where legislation permits, the local community and other stakeholders should be given an opportunity to review the EIA report and to submit comments to the proponent and review committee, within the specified timeline.
* It is recommended the EIA administrator asks the proponent to publish the EIA report on the proponent’s website, and to provide a soft copy and a minimum of five hard copies – to be made available to relevant government agencies, community groups and local libraries, to support an effective public review process.
* In some PICTs the review of the EIA report is a two-stage process: 1) a draft EIA report is submitted and comments are received from government and stakeholders; 2) a final EIA report is subsequently prepared, addressing the comments and responding to any new concerns or issues raised. A decision about whether to approve a development is then made on the basis of the final document.
 |
| **EIA REPORT ACCEPTED** **or**  | * Based on the review step the EIA administrator determines if the EIA report is adequate and whether or not it will be accepted.
* If the EIA report is accepted the EIA administrator will submit a review report for the consideration of the development approval agency. The review report will contain recommended conditions for environmental management and monitoring. Management and monitoring conditions should encourage a project to proceed with caution, and they should also promote project safety and resilience.
 |
| **NOT ACCEPTED** | * If the EIA report is considered inadequate and is not accepted, the proponent will be required to revise the document to address identified shortcomings. The proponent will then resubmit the EIA report to the EIA administrator for a second review.
 |
| **DEVELOPMENT APPROVAL AGENCY AND PROPONENT INFORMED** | * The EIA administrator informs both the proponent and the development approval agency that they have accepted the EIA report and developed recommendations for environmental management and monitoring.
* Depending on a PICT’s planning laws and policies, the proponent may have an opportunity to respond to the EIA administrator’s recommendations for management and monitoring conditions, and they may discuss the conditions directly with the development approval agency.
 |
| **DEVELOPMENT PROPOSAL APPROVED OR REJECTED** | * After examining all relevant information, including the proponent’s EIA report and the EIA administrator’s review report, and giving consideration to stakeholder views and the costs and benefits of a project, the approval agency will arrive at a decision to either:
* approve the development proposal and issue a permit for development, specifying terms and conditions subject to which the permit is issued; or
* reject the development proposal where there is unacceptable uncertainty surrounding the project’s environmental impacts or impacts of the environment on the project; the possibility of serious consequences for the environment and/or the development; and no mitigating measures.
* A key consideration in deciding whether a development will be approved or rejected is the proponent’s capacity to effectively implement environmental management measures and to avoid adverse effects on the environment and the development itself.
* The approval agency may issue a statement of reasons to justify the decision they have reached.
* Where legislation permits, the proponent and third parties (e.g. local communities, land/resource owners, other relevant stakeholder groups) may have an opportunity to appeal or legally challenge the approval agency’s decision, especially if they are unhappy with or aggrieved by a development rejection or approval decision or if they object to particular development approval conditions. Appeal provisions under legislation can allow for merits or judicial review of government decisions. Merits review considers all the evidence relating to the merits of a decision and determines whether or not a correct and preferable decision has been made. Judicial review examines the lawfulness of the decision-making process. Judicial review may consider matters such as whether a decision-maker has wrongly applied or misunderstood the law; behaved unreasonably; reached a decision that was affected by dishonesty, corruption, bribery or bias; failed to take into account relevant considerations; or taken into account irrelevant consideration.
 |
| **DEVELOPMENT (WITH CONDITIONS) ACTIONED** | * The proponent actions their development in line with the terms and conditions attached to their approval permit.
* At this stage of the EIA process, a key task for the proponent is to finalise and implement their environmental management plans based on the draft plans provided in the EIA report and the permit conditions issued by the approval agency.
* Environmental management should be designed to commence during the establishment/construction phase of a development, continue throughout the operational phase, and be ongoing during site restoration/rehabilitation (where applicable).
 |
| **DEVELOPMENT MONITORED AND CONDITIONS ENFORCED** | * Monitoring and enforcement is an essential part of the EIA process that helps to assure proponents, government agencies and community stakeholders that:
* environmental management plans have been effectively implemented;
* conditions attached to the development approval have been complied with;
* improved environmental and development outcomes have been achieved; and hence,
* the time and resources invested in EIA have been well-spent.
* The EIA administrator should monitor a development project throughout the construction and operation phases, and through to the decommissioning and site rehabilitation phases (where appropriate).
* If an EIA administrator lacks monitoring capacity and expertise, or if they are dealing with a number of ongoing projects that exceed their technical resources, it is advisable they seek support from other government agencies or engage the services of independent experts. It may be appropriate and beneficial for government officers to work alongside monitoring experts so they can build their own knowledge, experience and confidence.
* Monitoring activities by government officers or independent experts may involve site visits, direct inspection of operations, measurement of environmental parameters (e.g. water quality), and preparation and review of audit reports.
* Performance conditions and criteria should be clearly specified in a development approval to ensure both the proponent and the EIA administrator have clear benchmarks for monitoring and assessing environmental management performance.
* Monitoring and enforcement works most effectively where legislation outlines the responsibilities of, and prescribes specific powers for, the EIA administrator and the development approval agency. Legislation should also detail penalties that can be issued and actions that can be taken for non-compliance with approval conditions (e.g. suspension or cancellation of a development permit; issue of a pollution abatement order, prosecution notice or stop work order). The establishment of a multi-agency environmental monitoring committee can greatly assist the EIA administrator with effective monitoring and enforcement.
* The effort put into monitoring and enforcement should be aligned with the environmental risks posed by a project and the environmental hazards likely to affect a project, to ensure preparedness, safety and resilience at all times. Some projects will demand a lot of monitoring effort (e.g. a fish cannery developed on the coastal foreshore), while others will require relatively less effort (e.g. land-clearing for agricultural development).
* Traditional authority structures related to customary land ownership can also assist with monitoring and enforcement, especially where local village leaders are very familiar with a development site.
* Monitoring or audit reports should acknowledge good environmental performance and/or management, and identify any issues or activities that have resulted in non-compliance with development approval conditions. The reports should specify remediation or management actions that need to be undertaken by the developer to limit environmental damage and the vulnerability of the development, and to promote sustainable development outcomes. In cases of non-compliance, follow-up audits are important for determining if corrective management actions have been applied and if they have resulted in improvements in environmental performance and management.
* It is appropriate for government to ask a proponent to cover the costs of monitoring, especially if these costs are above and beyond government’s normal operational costs. At the start of the EIA process proponents should be encouraged to put aside funds to cover monitoring activities. This is a practical way for proponents to demonstrate their duty of care towards the environment.
 |

## 4.4 EIA and the project management cycle

A linear EIA process is detailed in Figure 3 and Table 2, however, it is important to remember that EIA is actually part of a larger project management cycle (Figure 4) – an ongoing process of identifying impacts, assessing the consequences of those impacts, putting in place management measures to deal with the impacts, monitoring and evaluating the management measures, and then making changes to the development project, if required. This cyclical process of adaptive management, or continual improvement, should be ongoing for the whole life of a development – from construction through to operation, through to site closure and rehabilitation, where relevant.



Figure 4: The EIA process should be seen as part of a larger project management cycle

## 4.5 Strategic Environmental Assessment: a process for supporting EIA

This section provides a brief introduction to the SEA process, to promote general awareness of the tool amongst SPREP member countries. As mentioned to in section 2.1, SEA is a complementary mechanism to the EIA process. SEA can be seen as an "up‐stream" process that identifies the best broad-scale development options at an early planning or programme stage, and that assists strategic policy- and decision-making; while EIA is a "down‐stream" process that identifies the best design options for individual projects coming through at a later stage.

Over the last decade the use of SEA has been evolving, with the tool being adapted and applied for different purposes in different parts of the world. For the Pacific context, the basic SEA process can be defined as follows:[[14]](#footnote-14)

1. Screening – to determine if an SEA is required and at what level of detail. Key questions that can be asked include: is a strategic assessment needed to assist with the development of a sustainable land-, ocean- or resource-use plan for a particular area? Is a policy, plan or programme likely to have a significant impact on the environment, or is it likely to be impacted by environmental hazards or environmental change processes, and do these impacts need to be addressed?
2. Scoping – to identify the key issues to be addressed by and the boundaries of the SEA, and to capture this information in terms of reference for the environmental assessment.
3. Environmental assessment – to examine, for a policy, plan or programme:
	* its environmental targets/objectives;
	* reasonable development alternatives or scenarios;
	* likely impacts (positive and negative) of the policy, plan or programme on the environment;
	* likely environmental hazards and environmental change processes that may affect policy, plan or programme implementation;
	* likely cumulative impacts that may result from the combined, incremental effects of human activities and/or physical events e.g. extreme weather events, natural disasters; and
	* viable management and mitigation measures that can support sustainable and resilient development.
4. Reporting – to detail the findings of the environmental assessment to government agencies, local communities and other stakeholders.
5. Monitoring – to examine the implementation of a policy, plan or programme to ensure that any unforeseen environmental impacts are identified; that appropriate remedial or risk reduction actions are being taken; and that the policy, plan or programme is contributing to sustainable and resilient development.

An important feature of SEA is consultation, which means engaging relevant government agencies, industry, non-government organisations (NGOs) and members of the public/local community during each step of the SEA process. A good SEA will facilitate constructive debate and discussion amongst stakeholders regarding the development of policy/plan/programme objectives and directions; the review of SEA results; and the development of recommendations for decision-makers. Effective and meaningful SEA consultation helps to promote social accountability and it can reduce the likelihood of future environmental conflicts.

Some of the recognised benefits of SEA are that it:[[15]](#footnote-15)

* encourages environmental concerns, opportunities, limitations and risks to be considered during the early stages of policy, plan and programme formulation, which in turn, helps to establish a governance framework for sustainable and resilient development;
* promotes transparent governance by encouraging public involvement in policy development and planning;
* provides early warning of cumulative impacts;
* identifies trade-offs between environmental, economic and social issues and enhances the chance of finding win-win options;
* sets a broad environmental and sustainable development vision for defined land/sea areas, economic sectors or themes, which in turn, sets the context for EIA and supports consistent decision-making for individual development projects; and
* reduces the time and effort required for EIA review, e.g. the SEA for a national renewable energy development plan might pinpoint locations where developments are/are not permissible; stipulate desired types and characteristics of renewable energy developments; and specify biodiversity protection and climate change and disaster risk management measures that need to be followed.

Key features of EIA and SEA are summarised and compared in Table 3, below.

Table 3: Comparing and contrasting the EIA and SEA processes.[[16]](#footnote-16)

|  |  |  |
| --- | --- | --- |
|  | **EIA: project scale** | **SEA: policy, plan and programme scale** |
| OBJECTIVE | To minimise and mitigate environmental impacts for projects, by setting specific environmental performance and management standards | To promote sustainable and resilient development by embedding sound environmental management within policies, plans and programmes  |
| SCOPE | Identifies environmental impacts for a specific project and location | Identifies environmental impacts related to a policy, plan or programme  |
| PERSPECTIVE | Narrow perspective, high level of site-specific detail | Broad, strategic perspective, more general environmental details |
| TYPE OF PROCESS | Well-defined process, clear beginning and end | Multi-stage, flexible and iterative process |
| ALTERNATIVES | Considers a limited number of feasible development alternatives, within the scope of a project | Considers a broad range of feasible development alternatives across a development sector, theme or land/oceanscape |
| CUMULATIVE IMPACTS | Limited review of cumulative impacts | Early warning of cumulative impacts |
| MONITORING | Focuses on measuring actual impacts  | Focuses on the outcomes of policy, plan and programme implementation |

# 5.0 Considerations and recommendations for effective EIA

This section outlines nine key considerations and recommendations for effective EIA:

1. Legislative mandate, backed by regulations, policies and supporting resources;
2. A strong, well-networked EIA administrator;
3. Local community, land/resource owner and stakeholder consultation;
4. Integration with the broader environmental governance context;
5. EIA customisation – making EIA ‘fit for purpose’;
6. Cost-benefit analysis;
7. Security deposits (environmental bonds);
8. The impact mitigation hierarchy; and
9. Rigorous data collection, analysis, presentation and storage.

Most of these considerations and recommendations should be part of standard EIA practice, however, some may be challenging to implement in PICTs due to resourcing and capacity constraints faced by EIA administrators. Nonetheless, all of the considerations and recommendations should be carefully reviewed by practitioners seeking to improve and strengthen the application of EIA.

## 5.1 Legislative mandate, backed by regulations, policies and supporting resources

The passing of EIA legislation and regulations demonstrates a government’s political commitment to the EIA process and its intent to meet EIA obligations under MEAs. An effective EIA process is grounded in legislation and regulations that clearly outline the:

* roles, authority and responsibilities of relevant government Ministers and agencies;
* roles and responsibilities of development proponents, the local community and other stakeholders;
* timelines that need to be followed for different stages of the EIA process including EIA screening, EIA scoping and EIA report review, to ensure EIA decisions are delivered within a reasonable timeframe; and
* enforcement provisions and penalties for non-compliance.

Box 4 specifies key matters or provisions that should be included under EIA legislation or legislation related to specific development sectors, to promote strong and effective EIA processes in PICTs. If these matters are not currently incorporated, SPREP recommends that PICTs consider revising their legislative frameworks.

It is important for EIA officers to have a thorough understanding of EIA legislation and regulations so they are fully aware of their responsibilities, the timelines they need to follow, and the critical role they play in development planning and assessment. It is also important that EIA legislation and regulations are transparent and publicly-available, in easily-accessible formats, so that proponents, the local community and other stakeholders are fully aware of how to participate in, and contribute to, the EIA process.

To ensure EIA legislation is successfully implemented it should be backed by policies and supporting resources (e.g. checklists, templates and guidelines) that provide guidance on practical, day-to-day EIA implementation. Policies and supporting resources allow EIA administrators to carry out their roles confidently, consistently, transparently and equitably. They promote the use of similar assessment methods for each development application, for both private and public developments, and across different types of land tenure. Examples of supporting resources include a project screening checklist (Tool 1), which can assist an EIA officer with determining if projects should be subject to an EIA; and a TOR template (Tool 2), which can help an EIA officer to prepare project-specific TOR.

EIA can be an expensive process, involving contributions from government staff, developers and private consultants. It is useful to have formal policies that specify who is responsible for bearing different EIA costs, particularly costs associated with public notifications, hiring consultants and undertaking environmental monitoring. By-and-large, EIA costs should be borne by the developer, as they will primarily benefit from the development. If the developer is a government department, then the department will need to allocate funding to cover EIA costs as part of their duty of providing services or infrastructure for the wider community.

**Box 4: Key matters to be addressed under legislation to support an effective EIA process**

It is recommended that EIA legislation, and/or legislation governing particular types of development, include provisions that:

* specify the EIA process needs to examine the potential impacts of a development on the environment and the potential impacts of the environment on a development, including impacts from climate change and natural disasters;
* require the development of TOR to guide the preparation of EIA reports, and the inclusion of the TOR in final EIA reports;
* require a non-technical summary to be included upfront in EIA reports. This summary should be translated into local language(s) where relevant;
* include appeal provisions, i.e. provisions that allow developers and third parties to seek merits or judicial review of government decisions that relate to the issuing of development approvals and approval conditions;
* provide a formal process for assessing the credentials of and registering consultants;
* provide for the development of formal arrangements between the EIA administrator and relevant government agencies to secure assistance with different stages of the EIA process, especially EIA report review and compliance monitoring and enforcement;
* allow for cost recovery from proponents for activities that will support a robust EIA process e.g. costs associated with commissioning an external review of EIA reports; with convening review panels for major projects; or with independent monitoring and enforcement; and
* include provisions for the calculation and levy of security deposits, especially for projects with the potential to cause serious long-term environmental impacts.

Many of the above points have been covered in greater detail in earlier sections of the EIA Guidelines, or they are expanded upon in sections below.

## 5.2 A strong, well-networked EIA administrator

An effective EIA process is led by an EIA administrator with a strong sense of direction, clear authority, and sound understanding of their roles and responsibilities. The EIA administrator should also have well-established networks with relevant government departments/agencies (e.g. agriculture, climate change, energy, fisheries, forestry, health, mining, urban and land-use planning, water); regional organisations (e.g. SPREP, Secretariat of the Pacific Community, Pacific Islands Forum Fisheries Agency, University of the South Pacific); and external experts or consultants. These networks are important for accessing knowledge and expertise that can assist with the assessment of complex, large-scale, highly technical or novel projects. SPREP has recently created the online Pacific Network for Environmental Assessment Practitioners, which PICT’s are encouraged to join to build and increase their own EIA networks around the region (see Box 5 for details).

**Box 5: Pacific Network for Environmental Assessment Practitioners (PNEAP)**

SPREP has created an online site to connect and support environmental assessment practitioners, especially those working within Pacific government ministries, departments and agencies. PNEAP provides:

* a listing of Pacific-based environmental assessment practitioners and professionals, to promote regional networking and the sharing of ideas and issues;
* a means for sending environmental assessment queries and assistance requests directly to SPREP; and
* a central location for the distribution of environmental assessment resources, templates and educational materials.

For further information and to register details with PNEAP, practitioners can visit: [insert web link when site is finalised]

Sometimes it may be advisable for an EIA administrator to use their networks (and relevant legislative provisions) to assemble a committee of experts to assist with EIA screening, scoping and review. This committee can meet on a regular (e.g. monthly) basis, depending on the number of development applications that need to be processed. When an EIA administrator draws upon technical support and input from other government agencies they can focus more effectively on the management of EIA rather than trying to meet all of the skill and knowledge requirements. Also, EIA costs can be shared across government rather than be borne by a single agency. Creation of formal inter-agency relationships (e.g. memorandums of understanding) can assist with the coordination of EIA committees. Formal relationships encourage more effective inter-agency engagement, especially on a project-by-project basis, and they are particularly important to ensure continuity of support when there are high rates of government staff turnover.

Some PICTs may also choose to develop a formal register of consultants that can be referred to whenever external expertise is required by government or proponents. Consultants’ credentials should be thoroughly scrutinised before they are eligible for listing on the register, and they should be required to pay an annual listing fee to the EIA administrator. The Fiji Government, for example, maintains an EIA Consultant Registration Scheme [section 39 *Environment Management (EIA Process) Regulations 2007*], whereby a list of approved and registered consultants is published annually by the Department of Environment.

## 5.3 Local community, land/resource owner and stakeholder consultation

Pacific land and seascapes are characterised by extensive customary land ownership and direct linkages between community livelihoods, subsistence lifestyles, natural resource conditions and sustainable development. Within this context, effective EIA must be participatory, engaging the local community and customary land/resource owners likely to be affected by a development, as well as other relevant stakeholders such as provincial or local government authorities; industry; NGOs; women’s, men’s and church groups.

The EIA process should allow for the gathering of community, land/resource owner and stakeholder values, opinions and perspectives on a development. Early and effective consultation can help to ensure that environmental assessment is conducted transparently and objectively; that the most significant issues and concerns are identified from the start of the EIA process; that a project responds to local needs; and that a proponent builds credibility and trust with local communities, which in turn, can support smoother project construction and operation.

Consultation with local communities and land/resource owners may also facilitate the collection of local resource, environmental and traditional knowledge. This knowledge can help build an understanding of environmental baseline conditions, especially in remote locations where scientific information is absent or unreliable. There may, however, be intellectual property issues surrounding traditional knowledge and it may not be appropriate to allow full public access. A broad discussion should be held within individual PICTs about how traditional knowledge can be appropriately accessed and used to support the EIA process and the common good.

It is important to recognise that the positive and negative impacts of development are unlikely to be spread equally. Local community, land/resource owner and stakeholder consultation can assist with identifying who is likely to benefit and who might be worse off, and what corrective management actions are needed to minimise negative impacts or to redistribute benefits. Comprehensive engagement and consultation will help the local community, land/resource owners and other stakeholders to understand the project planning and approval process, even if they do not ultimately agree with all of the decisions that are made.

Local community, land/resource owner and stakeholder consultation is sometimes a requirement under EIA legislation. This legal requirement can be supported by guidelines that outline appropriate consultation and engagement practices and that identify who should be consulted. In a Pacific context consultation could involve:

* making project information publicly-available when an EIA is first declared, and giving the local community, land/resource owners and other stakeholders a limited period of time within which to raise issues and suggestions for the EIA terms of reference;
* making use of existing community governance structures for consultation, or incorporating traditional public hearing and comment procedures within the EIA process; and
* placing copies of the EIA report in national, provincial, local government or NGO offices; local libraries; local shops or banks; or on government and proponent’s web sites, to allow community members, land/resource owners and other stakeholders to directly access and provide comment on the report.

EIA reports are often highly technical documents, so it is essential a non-technical summary is included upfront, written in a language (or languages) that can be easily understood by all stakeholders, especially land/resource owners. Where literacy or social/cultural barriers prevent local communities or land/resource owners from accessing an EIA report it may be advisable for the proponent to consider alternative communication approaches such as local language videos, presentations, radio programmes, meetings and/or workshops.

Two concepts commonly associated with local community, land/resource owner and stakeholder engagement are ‘social licence to operate’ and ‘free, prior, and informed consent’ (Box 6).[[17]](#footnote-17) These concepts are about ensuring that local people will be properly consulted and will have an opportunity to learn about, and participate in, decision-making processes that will affect them.

**Box 6: Social licence to operate and free, prior and informed consent**

Social licence to operate is a voluntary and informal construct that refers to a local community granting ongoing support for a development project. It is not part of the formal EIA or development assessment process; the onus is on the developer to earn and maintain their social licence to operate through legitimate, credible and trustworthy dealings with community members. These dealings may extend to respecting cultural sensitivities; ensuring worker safety; fulfilling environmental care obligations; negotiating on community impacts and benefits; and sharing information that is accurate, comprehensive, and unbiased. In other words, social licence to operate is about the developer establishing and maintaining goodwill with the community, which is sometimes materialised in a negotiated ‘benefits agreement’ or ‘benefits package’.

A social licence to operate is dynamic and context-specific, i.e. it is specific to a site, to a particular development, and to a relevant group of affected stakeholders. A developer may need to maintain ongoing dialogue with community members throughout the life of a development, in order to uphold their social licence. Through this process of open dialogue, developers will face reduced business risk from social opposition and social impacts, while community members can benefit from being directly involved in decisions that affect their future.

Free, prior and informed consent (FPIC) complements, and can be a requirement for, obtaining a formal development approval and an informal social licence to operate. It involves community consultations that are free from coercion, interference or pressure; that allow for equal participation by all affected groups (including women and minority groups); that occur before major development decisions are made; and that provide access to all relevant information in an easy-to-understand format, including information about potential development impacts and development alternatives, informed by independent experts. Generally, FPIC applies to development projects that will: involve the relocation of Indigenous peoples; impact on land or natural resources under traditional ownership or customary use; significantly impact on cultural heritage; or use cultural resources for commercial gain.[[18]](#footnote-18) FPIC gives a local community the opportunity to not only grant consent or support for a development, but to also withhold it.

In the Pacific context, a social licence to operate and FPIC may be particularly important for large-scale development projects that will have significant impacts on communities and on customary land and resources, or that will interfere with other land and sea uses. Obtaining FPIC and a social licence to operate may be a multi-stage process that involves the proponent holding a series of discussions with community chiefs and leaders; community chiefs and leaders discussing issues with their own people; and consultation sessions between the proponent and women’s, men’s, NGO and church groups. The process may need to be supported by the use of translators during meetings; the translation of printed materials into local languages; the use of DVDs, photographs or drawings to explain the nature of the project; and visits to similar development sites.

## 5.4 Integration with the broader environmental governance context

The EIA process should not be implemented in isolation; it works best when it is applied with reference to the broader environmental governance context, which is comprised of international and regional MEAs; international, regional, national and sub-national policies, plans and programmes; and government legislation (Figure 5). The broader environmental governance context is useful for EIA because it specifies objectives, targets and obligations that need to be met for different environmental issues, and it provides guidance on how particular issues should be addressed (e.g. climate change, disaster risk management, biodiversity conservation, waste management, customary land tenure, healthcare, economic development, energy/water resource management). For example, in conducting an EIA for a new industrial development an EIA administrator can consider whether the development aligns with objectives under the government’s land-use policy and national sustainable development strategy; with targets under the national climate change and disaster risk management policy; and with obligations under the Stockholm Convention and customary land tenure laws.

Appendix 2 provides an extensive listing of different types of environmental governance instruments that may be relevant to the EIA process, especially during stages such as TOR development, EIA report review, approval decision-making, and the development of approval conditions.



Figure 5: EIAs and the broader environmental governance context. An effective EIA process refers to other levels of environmental governance (i.e. international and regional MEAs; national policies, plans and programmes; national legislation) to ensure that new development projects meet broader environmental objectives and targets.

‘Mainstreaming’ is a term related to environmental governance considerations; it refers to the integration of relevant policy and planning issues in the EIA process. Mainstreaming is about ensuring that relevant issues receive adequate attention and that new developments will not exacerbate current problems (e.g. coastal erosion), increase vulnerability to hazards (e.g. extreme weather events), or work in opposition to existing policy obligations (e.g. those outlined in MEAs). Box 7 focuses on mainstreaming climate change and disaster risk management considerations in EIA. Ideally, mainstreaming should commence at the start of the development planning and design process, even before a development proposal is submitted to government.

 **Box 7: Climate change and disaster risk management mainstreaming in EIA**

All PICTs should be mainstreaming climate change and disaster risk management considerations in their EIA processes so as to promote resilient development. This type of mainstreaming involves developers:

* assessing climate change and disaster hazards for their project and its surrounding area;
* assessing the contribution of their project to climate change and disaster hazards (e.g. release of greenhouse gas emissions, removal of protective coastal vegetation);
* identifying ways to improve on project siting and design through the evaluation of future climate predictions and the adoption of climate change and disaster risk mitigation measures; and
* incorporating climate change adaptation and disaster risk management in their environmental management plans and environmental monitoring programmes.

Government has a mainstreaming role too; they should:

* identify climate change and disaster hazards for a project and the contribution of a project to climate change and disaster hazards during screening, scoping and EIA report review (see Tools 1, 2 and 3);
* refer to relevant policies and plans (e.g. National Climate Change Policy, Joint National Action Plan, National Adaptation Programme of Action) and their obligations under the UNFCCC, when reviewing, approving and monitoring development projects.

The state of Kosrae, Federated States of Micronesia, has led the way on climate change mainstreaming by amending its *Regulations for Development Projects* and explicitly requiring that all EIAs assess the effects of natural change, climate change and impacts of extreme weather/climate events on a proposed activity. EIAs in Kosrae must also look at incorporating adequate climate change adaptation measures for the proposed operating life of a project.

PICTs are encouraged to review, and where necessary, amend their EIA legislation to ensure it addresses the potential impacts of climate change and disasters on developments, and the potential impacts of developments on climate change and disaster risks. For a detailed overview of climate change mainstreaming it is recommended that readers consult: *Mainstreaming climate change into development in the Pacific: A practical guide*.[[19]](#footnote-19)

By mainstreaming relevant issues and integrating EIA with the broader environmental governance context, EIA administrators are likely to be more aware and capable of addressing cumulative impacts. Cumulative impacts are changes in the environment, in an identified area, resulting from the combined, incremental effects of past, present and future human activities, as well as environmental change processes (e.g. climate change) and physical events (e.g. extreme weather events and natural disasters). An example of cumulative impacts is the progressive clearing of mangroves along a coastline for housing, industrial and tourism developments, which results in widespread coastal erosion, fish habitat degradation and increased vulnerability to extreme weather events, storm surge and sea level rise. The broader environmental governance context encourages EIA administrators to think beyond individual development sites, to regional development clusters or industry-wide development, and to be mindful of the need to manage for larger-scale environmental issues.

## 5.5 EIA customisation – making EIA ‘fit for purpose’

The general EIA steps featured in Figure 3 and Table 2 can be applied to large and small projects alike, however, the level of effort that is actually committed to the EIA process should be in line with the type of development project that is under assessment, its scale and location, and the potential impacts and opportunities that are associated with it. All of these factors will influence what level of effort and resources an EIA administrator needs to draw upon, and how the EIA process should be used, to ensure an appropriate assessment is undertaken. In other words, the EIA process should be customised for each project proposal, i.e. be made ‘fit for purpose’, with an objective of achieving a better environmental outcome not just performing a ‘tick-the-box’ exercise. Three different development examples are provided in Box 8 to illustrate how the EIA process can be customised.

**Box 8: Making the EIA process ‘fit for purpose’**

Example 1: Logging project

A logging company is planning to clear an extensive area of forest in a coastal zone for overseas markets. Direct impacts will include loss of forest habitat and native species, loss of forest resources for local villagers (including food and building materials), additional land clearing to construct roads to transport the harvested logs, loss of carbon storage organs and greenhouse gas emissions. If the project is poorly managed it may also result in accelerated erosion, sedimentation of adjacent coastal waters, and adverse effects on seagrass, corals and marine fisheries. The EIA administrator is aware the area proposed for logging is under customary title. Before the project and the EIA process proceeds further, the EIA administrator asks the company to undertake extensive consultation with customary land and resource owners, and to provide them with a clear and complete understanding of potential project impacts, potential project benefits (e.g. job opportunities for local villagers, infrastructure improvements, royalty and tax payments) and long-term land use opportunities (e.g. farming, cattle production and reforestation). The EIA administrator decides that the company must secure support from and enter into a development agreement with customary land and resource owners, before it prepares TOR for a detailed EIA report and Environmental Management Plan (EMP).

Example 2: Large-scale mining project

A mining company is proposing to establish a new open-pit mine that will result in significant environmental impacts e.g. native forest clearing; groundwater extraction; production of significant amounts of liquid and solid waste; and encroachment upon a nearby village. On the positive-side, the proposed mine is likely to generate significant revenue for government, and employment and training opportunities for local villagers. The EIA administrator determines that a full and extensive EIA should be conducted and that comprehensive TOR will be developed for a detailed EIA report and EMP. The EIA administrator also decides that it will seek specialist advice from other government agencies, consultants and regional organisations with expertise in minerals processing; hydrogeology; wastewater management; soil and vegetation rehabilitation; pollution control; and climate change and disaster risk management. The EIA administrator will call on external expertise at various stages of the EIA process, i.e. proposal screening, TOR development, EIA report review, development of management recommendations, and performance monitoring and auditing. The EIA administrator will also require the proponent to undertake extensive stakeholder consultation to ensure that social and economic impacts are addressed alongside environmental impacts, and that appropriate mitigation strategies are developed with input from affected stakeholders.

Example 3: Housing subdivision – 15 lots

A developer wants to establish a housing subdivision on abandoned agricultural land, on the outskirts of a village. Key development impacts will include generation of dust and noise and increased traffic on local roads. Soil erosion is also a potential risk. As the development is taking place on previously cleared land there will be no significant biodiversity impacts. The EIA administrator decides the first step will be to undertake a SEA, or a strategic land use assessment, which examines different land-use options for the abandoned agricultural land and surrounding district, and which provides recommendations for optimal land-use over a 50 year timeframe, taking into account matters such as population growth and demographic changes, housing and industry development needs, climate change predictions, and potential impacts from other environmental change processes and environmental hazards. The SEA will then inform EIAs for individual development proposals, such as the housing subdivision. The EIA administrator decides to call on expertise from the Agriculture, Climate Change, Town and Urban Planning, Land Transport, and Water Resource Management agencies to undertake an SEA that will support a detailed land-use policy.

## 5.6 Cost-benefit analysis

Cost−benefit analysis (CBA) is a tool that helps to inform government decision-making. This section provides a brief introduction to CBA in the context of EIA, with reference to: *Cost-Benefit Analysis for Natural Resource Management in the Pacific: A Guide* (CBA Pacific Guide).[[20]](#footnote-20)

CBA is a systematic process for identifying, valuing, and comparing the costs (disadvantages) and benefits (advantages) of different project options. It assesses costs and benefits from a whole of society perspective rather than from the perspective of a private entity, interest group or individual. CBA is not limited to monetary or quantitative analyses; it may include costs and benefits relating to any good or service that has a value to society, e.g. costs and benefits relating to biodiversity and human safety.

Within the EIA process, the CBA tool can be used to inform specific elements of project design. For example, it can be used to assess the relative costs and benefits of different potential project sites and construction methods, to help determine which project design choices will most appropriately balance desired environmental outcomes (benefits) against additional construction costs.

Findings from an EIA can also be used as input to a broader CBA. That is, environmental data and information produced during the EIA process can be used within a CBA to help establish the importance of environmental impacts relative to other costs and benefits for different project options. This will help Government decision-makers to better understand the trade-offs of alternative project options, and in turn, assist them to make decisions that better serve the needs of the community.

To develop a sound and comprehensive understanding of the CBA tool and its application, it is recommended that EIA practitioners refer directly to the CBA Pacific Guide.

## 5.7 Security deposits (environmental bonds)

A security deposit or environmental bond is a payment made by a developer to government, which acts as a form of insurance against government having to pay for environmental damage, remediation or clean up costs in the event that a development causes environmental harm and the developer defaults on their environmental management obligations. Security deposits are typically applied to mining operations and some PICs have provisions within their land-based mining legislation (e.g. *Mining Act 1992*, Papua New Guinea) and seabed mining legislation (e.g. *Seabed Minerals Act 2009*, Cook Islands; *Seabed Minerals Act 2014*, Tonga; *Tuvalu Seabed Minerals Act 2014*). In theory, legislative provisions could be written to allow for the application of security deposits to any type of development that has the potential to cause significant environmental impacts.

A security deposit is usually calculated and paid prior to development construction and operation. The calculation is based on the cost of stabilising, repairing and rehabilitating a site, taking into account the size of a development, the level of risk it poses, and the extent of environmental harm it could potentially cause. Where legislation permits, security deposits can be imposed on a developer as a condition attached to their development approval.

A security deposit is released or fully refunded once a developer has met all of the environmental management and/or site closure criteria specified in their development approval. These criteria may require a developer to undertake environmental monitoring activities over a certain time period beyond the life of a development, to ensure there is no ongoing environmental harm.

Prior to the application of a security deposit it is important that potential impacts of the project on the environment or impacts of the environment on the project are comprehensively evaluated and appropriate management plans are developed and applied through the EIA process. Security deposits should only be relied on as a last resort; it is preferable that appropriate environmental management actions are adequately completed by a developer, rather than Government needing to rely on a security to undertake necessary works.

## 5.8 The impact mitigation hierarchy

There is a widely-accepted impact mitigation hierarchy used in EIA processes worldwide, which in order of preference is: avoid, minimise, rehabilitate and offset (or compensate for) impacts.[[21]](#footnote-21) The impact mitigation hierarchy has been primarily developed in the context of biodiversity management but it can be applied to any negative environmental, social or economic impact. The hierarchy’s terms are defined as follows:

* *Avoid* – take measures from the outset of development planning to avoid creating negative impacts e.g. refrain from building in areas that are environmentally or socially sensitive; ensure that the capture, storage and processing of a pollutant is incorporated in project design, rather than allow direct discharge of the pollutant to the environment.
* *Minimise* – take measures to reduce the duration, intensity and/or extent of negative impacts, where they cannot be avoided e.g. decrease the seabed area that needs to be dredged for a new shipping channel; reduce the rate and overall amount of non-renewable resource extraction.
* *Rehabilitate* – take measures to restore degraded ecological or social systems following exposure to negative impacts that cannot be avoided or minimised e.g. restock a fishery; replant cleared habitat; improve and resurface roads that will face increased traffic from a major development.
* *Offset (or compensate)* – take measures to offset or compensate for negative impacts that cannot be avoided, minimised or rehabilitated e.g. implement habitat enhancement and ongoing conservation protection for a forest that is three times the size of another forest area that was cleared for a new housing development; implement a resettlement plan and provide housing for villagers affected by a hydroelectric development.

The impact mitigation hierarchy should be considered by both the proponent and the EIA administrator in determining how best to deal with negative impacts that arise during the EIA process. The hierarchy can assist with the development of a project’s environmental management plan by guiding the choice of the most effective and desirable mitigation measures.

## 5.9 Rigorous data collection, analysis, presentation and storage

Rigorous data collection, analysis and presentation are important for a robust and meaningful EIA process. An EIA report should present accurate and relevant baseline data for a development site and its surrounding area, to promote sound understanding of existing environmental conditions and potential impacts. Depending on the type and scale of development, the data presented in an EIA report may encompass ecological, economic and social (including cultural) variables, and it may be quantitative or qualitative. Often proponents will collect their own on-site data but they might also need to access baseline data from government agencies and regional universities.

Once a development gets underway an environmental monitoring programme should be implemented by the proponent, which includes on-ground monitoring and data analysis and regular presentation of results to the EIA administrator and/or other government regulatory authorities. Environmental monitoring involves the collection of new data, which is compared to baseline data, to determine if a development has contributed to, or resulted in, environmental change. In the case of large-scale, complex or contentious developments the EIA administrator can nominate an independent consultant to undertake environmental monitoring to promote unbiased assessment of environmental performance. All costs related to environmental monitoring should be covered by the proponent.

Data collection, analysis and presentation during the EIA process should focus on a development’s potential impacts on environmental conditions, features, processes and functions; and the potential impacts of environmental hazards and environmental change processes on a development. Where relevant, EIA data should also be presented in a spatial format (i.e. using a Geographic Information System, GIS), to assist with understanding the physical location and extent of a development, and the scope and scale of impacts.

It is recommended that all environmental data provided to the EIA administrator, especially data that is not ‘commercial in confidence’, be managed as an information asset. Ideally, data from EIA baseline and monitoring studies should be stored in a national database that allows for easy retrieval and analysis of information, and for the integration of data across project sites, where feasible, to support State of the Environment and MEA reporting, and the identification of cumulative impacts.

The national database should be jointly developed with other government agencies, regional organisations and research institutions, with agreed protocols for data input, storage, access and sharing. Table 4 provides examples of themes and indicators that may be relevant to the EIA process and that can be included in a national database. These themes and indicators are linked to the State of the Environment reporting work that SPREP is currently supporting in member countries. Ultimately, the list of themes and indicators to be included in a national database will depend on the type and scale of development projects taking place in a PICT; the environmental conditions, features, processes and functions that need to be most closely monitored; and a PICT’s environmental reporting obligations, especially with regard to MEAs.

Table 4: Examples of environmental themes and indicators for EIA data. These themes and indicators can contribute to State of the Environment and MEA reporting, especially if datasets are aggregated across a number of project sites. Government may need to stipulate environmental monitoring and reporting protocols for some indicators to ensure data can be aggregated in a scientifically valid way.

|  |  |
| --- | --- |
| Environmental theme | Project-level indicators\* |
| Atmosphere and climate | * Greenhouse gas emissions (tonnes CO2-e) per year
* Aggregate greenhouse gas emissions (tonnes CO2-e) over project life
* Air quality in project area (e.g. levels of carbon monoxide, nitrogen dioxide, particulate matter, sulphur dioxide)
 |
| Biodiversity | * Type(s) of threatened species identified in project area^
* Number of threatened species identified in project area (species/hectare)
* Type(s) of invasive species identified in project area^
* Number of invasive species identified in project area (species/ hectare)
 |
| Land  | * Area of primary forest protected (hectares)
* Area of primary forest cleared (hectares)
* Area of secondary forest protected (hectares)
* Area of secondary forest cleared (hectares)
* Area of crop land under cultivation (hectares)
* Area of crop land cleared (hectares)
* Type(s) of crops under cultivation^
 |
| Local/national economy | * Number of local people employed across the life of the project
* Tax revenue per year
* Royalty payments per year
 |
| Marine | * Percentage live coral cover in project area
* Lagoon/harbour water quality (e.g. levels of pH, dissolved oxygen, total nitrogen, total phosphorus, total suspended sediment)
* Fish biomass harvested per year
* Fish biomass harvested over project life
* Sea level rise (mm per year)
 |
| Natural resources | * Volume of mineral resource(s) extracted per year
* Volume of mineral resource(s) extracted over project life
 |
| Waste | * Volume of wastewater production (L/month or L/year)
* Volume of solid waste production (tonnes/month or tones/year)
 |
| Inland waters | * Volume of groundwater extracted (litres per year)
* Volume of surface water extracted (litres per year)
* River/stream water quality (e.g. levels of pH, dissolved oxygen, total nitrogen, total phosphorus, total suspended sediment)
 |
| Built environment | * Number of new houses built across the life of the project
* Traffic volumes in identified project area (trucks/week or trucks/year)
 |

\* Individual projects can supply data for these indicators, where relevant.

^ Qualitative data.

# 6.0 Environmental Impact Assessment toolkit

The Environmental Impact Assessment toolkit contains four tools:

* Tool 1 – EIA screening checklist;
* Tool 2 – Terms of reference template;
* Tool 3 – EIA report review template; and
* Tool 4 – Risk assessment – an example approach.

These tools provide a starting point for EIA administrators and practitioners; they should be amended and adapted to suit different legislative contexts and different types of development activities in PICTs.

## Tool 1:EIA screening checklist

The screening checklist tool is designed to assist EIA officers with determining if an EIA is required, based on the characteristics of a proposed development project, its planned location and the potential *environmental impacts arising from the project* or the potential *impacts of the environment on the project*. Completion of a checklist supports structured and robust EIA decision-making and good record-keeping. The checklist can also be referred to during later stages of the EIA process to help inform further actions and decision-making, e.g. it can provide a foundation for the scoping process.

Answers to checklist questions will be primarily based on information supplied by the project proponent in their development proposal. Sometimes it may be necessary to seek additional information in order to complete the checklist. Alternatively, the proponent could be asked to work through the checklist as a form of preliminary environmental assessment, sometimes referred to as a Preliminary Environmental Impact Assessment or a Preliminary Environmental Assessment Report.

Many of the checklist questions can be answered with yes, no, or not applicable (N.A.), however, some may require a short descriptive answer. There is a degree of overlap between some of the questions, but this helps to ensure that all important issues will be adequately considered.

Upon completion of the checklist an EIA officer should be able to reach an informed decision and deliver a recommendation to the EIA administrator about whether a full EIA is required. In situations where there are many potential impacts; where management of impacts is likely to be difficult or is unclear; or where there are unknown and uncertain impacts; the proponent should be asked to undertake a full EIA.

|  |
| --- |
| **EIA SCREENING CHECKLIST** |
| **Section 1 – Project details** |
| Project reference no. |  |
| Project name |  |
| Project proponent (developer) |  |
| Proponent’s email address |  |
| Proponent’s phone number |  |
| Project location (including coordinates, if available) |  |
| Type and purpose of project (brief description) |  |
| **Section 2 – Size and scale of the proposed project** |
| *Questions to be considered* | *Yes/no/N.A./brief description* | *Is this likely to result in a significant environmental impact – yes/no? Negative or positive? Long-term, short-term or irreversible?* | *Does the potential impact need to be further investigated? Will it require management?* |
| 2.1 What area of land and/or sea will be developed? (indicate size of area, in m2 or km2) |  |  |  |
| 2.2 Is the project area larger than previous projects of this type? |  |  |  |
| 2.3 Will a large amount of energy, water or other natural resources be required for project construction and operation? |  |  |  |
| 2.4 Will a large workforce be needed? Is a local and/or external workforce to be employed? |  |  |  |
| 2.5 What is the expected timeframe for the project? (including construction, operation, closure and decommissioning – if appropriate) |  |  |  |
| **Section 3 – Character of the proposed project** |
| *Questions to be considered* | *Yes/no/N.A./brief description* | *Is this likely to result in a significant environmental impact – yes/no? Negative or positive? Long-term, short-term or irreversible?* | *Does the potential impact need to be further investigated? Will it require management?* |
| 3.1 What type of construction or operational activities will be undertaken by the project?  |  |  |  |
| 3.2 Are the project activities novel (new) or have they been undertaken before on the island, or in the Pacific region? |  |  |  |
| **Section 4 – Project location** |
| *Questions to be considered* | *Yes/no/N.A./brief description* | *Is this likely to result in a significant environmental impact – yes/no? Negative or positive? Long-term, short-term or irreversible?* | *Does the potential impact need to be further investigated? Will it require management?* |
| 4.1 Is the project to be located within or adjacent to a vulnerable area (e.g. low-lying coastal area, floodplain, wetland, sloping lands)? |  |  |  |
| 4.2 Is the project to be located adjacent to a sensitive site or facility (e.g. historical or archaeological site, conservation reserve, school, hospital/medical facility)? |  |  |  |
| 4.3 Is the project likely to impact on existing land or sea uses/activities?  |  |  |  |
| 4.4 Is the proposed site suitable for the project (e.g. appropriate set-back from the coast, streams or rivers; no steep or eroding slopes)? |  |  |  |
| 4.5 Is the proposed project site customary land? Are all customary land/resource owners aware of the project proposal? |  |  |  |
| 4.6 Are there special land zoning considerations that need to be taken into account (e.g. will the project be within a conservation reserve, rural, urban or industrial area)? |  |  |  |
| **Section 5 – Environmental impacts**  |
| *Aspect of the environment* | *Questions to be considered.* *Is the proposed project likely to result in...* | *Yes/no/N.A./brief description* | *Is this likely to result in a significant environmental impact – yes/no? Negative or positive? Long-term, short-term or irreversible?* | *Does the potential environmental impact need to be further investigated? Will it require management?* |
| 5.1 Topography, geology and soils | 5.1.1 Destruction, covering or modification of any unique geological or biophysical feature? |  |  |  |
| 5.1.2 Soil contamination or disturbance of previously contaminated soils? |  |  |  |
| 5.1.3 Disturbance of soils that are fragile, or susceptible to erosion or compaction? |  |  |  |
| 5.1.4 Creation of steep slopes or other unstable land conditions? |  |  |  |
| 5.1.5 Changes in the channel of a stream, or the bed of the ocean or lagoon? |  |  |  |
| 5.2 Water | 5.2.1 Drawdown of ground, surface or tank water resources, or reduction in the amount of water available for the public water supply? |  |  |  |
| 5.2.2 Pollution of ground, surface, coastal or sea water, via direct or indirect discharges or seepages; or through interception of an aquifer by drilling, cuts or excavations? |  |  |  |
| 5.2.3 Changes in currents, or the course or direction of marine or fresh water movement? |  |  |  |
| 5.2.4 Changes in runoff, drainage patterns or absorption rates? |  |  |  |
| 5.2.5 Coastal, stream or river flooding? |  |  |  |
| 5.3 Air | 5.3.1 Release of hazardous, toxic or noxious emissions to air?  |  |  |  |
| 5.3.2 A significant increase or decrease in local or regional greenhouse gas emissions? |  |  |  |
| 5.4 Noise | 5.4.1 A significant increase in existing (baseline) noise levels that will adversely affect people or animals?  |  |  |  |
| 5.5 Plant life | 5.5.1 Damage to or clearing of vegetation communities (e.g. upland or mangrove forest)? |  |  |  |
| 5.5.2 Damage to or destruction of important plant communities (e.g. seagrass beds; plants with medicinal, cultural or commercial value; unique, threatened or endangered plant species)? |  |  |  |
| 5.5.3 Interference with normal plant replenishment or reforestation rates? |  |  |  |
| 5.5.4 A reduction in agricultural crop production? |  |  |  |
| 5.5.5 The introduction and harvest of an exotic plant species? |  |  |  |
| 5.5.6 The spread or introduction of an invasive plant species? |  |  |  |
| 5.6 Animal life | 5.6.1 Damage to or destruction of coral reef areas? |  |  |  |
| 5.6.2 Reductions in the numbers of unique, rare or endangered animal species? |  |  |  |
| 5.6.3 Reductions in animal populations harvested regularly for human consumption (e.g. fisheries)? |  |  |  |
| 5.6.4 Damage to or destruction of habitat for animal communities on land, in rivers or in the ocean? |  |  |  |
| 5.6.5 Barriers to the migration or movement of animals? |  |  |  |
| 5.6.6 The introduction and harvest of an exotic animal species? |  |  |  |
| 5.6.7 The spread or introduction of an invasive animal species? |  |  |  |
| 5.7 Natural resources | 5.7.1 The extraction, harvest or consumption of natural resources (e.g. timber, minerals, water)? |  |  |  |
| 5.7.2 A noticeable increase in the rate of use of any natural resource? |  |  |  |
| 5.7.3 Substantial depletion of non-renewable resources? |  |  |  |
| 5.8 Human communities | 5.8.1 The relocation or resettlement of existing village/human settlements? |  |  |  |
| 5.8.2 Altered density or growth rate of the local human population? |  |  |  |
| 5.8.3 Demand for additional housing? |  |  |  |
| 5.8.4 Increased traffic or increased use of roads and the existing transport system? |  |  |  |
| 5.8.5 Increased demand for government or private services? (e.g. water and energy supply, communications, sewage and waste disposal, fire protection, police, schools, medical care) |  |  |  |
| 5.8.6 A reduction in community aesthetics or obstruction of scenic vistas? |  |  |  |
| 5.8.7 Disruption to traditional village lifestyles or communities? |  |  |  |
| 5.8.8 A change in local culture or customs? |  |  |  |
| 5.8.9 Changes in access to or the quality of recreational opportunities (e.g. sites used for nature-based tourism)? |  |  |  |
| 5.8.10 Public opposition, resistance or controversy? |  |  |  |
| 5.9 Local and national economy | 5.9.1 Creation or elimination of jobs/livelihood opportunities for locals? |  |  |  |
| 5.9.2 Training or educational opportunities for locals? |  |  |  |
| 5.9.3 Local or national tax revenue? |  |  |  |
| 5.9.4 Industry development opportunities? |  |  |  |
| 5.9.5 Economic benefits for locals and/or benefits for outsiders (e.g. investors, businesses and workers from overseas)? |  |  |  |
| **Section 6 – Environmental hazards** |
| *Questions to be considered.**Is the proposed project likely to result in...* | *Yes/no/N.A./brief description* | *Is this likely to result in a significant impact on the project – yes/no? Negative or positive? Long-term, short-term or irreversible?* | *Does the potential impact on the project need to be further investigated? Will it require management?* |
| 6.1 Increased risk of an explosion or release of hazardous substances, especially in the event of an accident or a disruption to normal operating conditions?  |  |  |  |
| 6.2 Increased health and safety hazards or risks for people (N.B. this could involve the use, storage, transport, handling or production of potentially harmful substances)?  |  |  |  |
| 6.3 Exposure of people or property to water-related hazards (e.g. flooding, tidal waves)?  |  |  |  |
| 6.4 Exposure of people or property to geological hazards (e.g. landslides, ground failure)? Or will the project itself potentially be exposed to geological hazards (e.g. earthquakes, tsunami)? |  |  |  |
| **Section 7 – Environmental change** |
| *Questions to be considered.**Will the proposed project be affected by...* | *Yes/no/N.A./brief description* | *Is this likely to result in a significant impact on the project – yes/no? Negative or positive? Long-term, short-term or irreversible?* | *Does the potential impact on the project need to be further investigated? Will it require management?* |
| 7.1 Loss of land from shoreline change or coastal erosion, especially associated with extreme weather events? |  |  |  |
| 7.2 The effects of sea-level rise? |  |  |  |
| 7.3 Flooding from high tides, large swells, extreme rainfall or storm-related events? |  |  |  |
| 7.4 Other impacts related to climate change or climate variability?  |  |  |  |
| **Section 8 – Uncertainty surrounding potential impacts and risks** |
| *Questions to be considered* | *Yes/no/N.A./brief description* | *Is further investigation required?*  |
| 8.1 Are potential short, medium and long-term impacts and risks easily identified and well-understood? |  |  |
| 8.2 Have similar projects been well-studied and managed elsewhere? |  |  |
| 8.3 Is there potential for cumulative impacts resulting from this project, other existing or planned projects, and from climate change/disasters? |  |  |
| **Section 9 – Broader policy and planning context** |
| *Questions to be considered* | *Yes/no/N.A./brief description* | *Is further investigation required?* |
| 9.1 Are there particular goals, targets or obligations under government policies, plans or legislation that are likely to trigger a formal EIA assessment? |  |  |
| 9.2 Is the project relevant to any MEA commitments or obligations? (e.g. CBD, CMS, CITIES, Ramsar, Stockholm Convention, MARPOL, UNCLOS, UNCCD, UNFCCC) |  |  |
| 9.3 Are there any areas within or around the proposed project site that are protected under international, national or local laws? |  |  |

**Recommendation:**

* **EIA required**
* **EIA not required. No conditions recommended for the development approval**
* **EIA not required. It is recommended the following conditions be attached to the development approval:**

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**Reasons for recommendation:**

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**Screening officer(s) name(s): Signature(s):**

**Date:**

## Tool 2:Terms of reference template

A terms of reference (TOR) template is provided below, covering a range of topics that are often addressed in an EIA report. This generic template can be modified, shortened or added to by EIA officers, depending on the scale of a project, its environmental setting, and the industry sector within which it operates. TOR development should also be guided by a PICT’s EIA legislation, regulations and policies and any MEAs they are a signatory to.

TOR prepared for a particular project should not only list general topics but include specific information requests related to the development. Clear TOR help proponents and consultants to prepare a quality EIA report with sufficient and relevant information, so that a project’s likely impacts on the environment and the likely impacts of the environment on a project can be adequately analysed and understood. For example, TOR for a tourist resort might ask a proponent to provide detailed information about the sourcing of potable water, the treatment of wastewater, the management of solid waste, and set-back distances for buildings situated along the coastline; while TOR for a seawall project might request detailed information about coastal hydrology and weather patterns, seabed bathymetry, coral and seagrass communities and local fishing grounds.

The following definitions are important for using the TOR template:

* ‘environment’ includes environmental (natural and physical environment), social (people, culture, health, heritage, aesthetics, amenity) and economic aspects, as well as the relationships between these different aspects;
* ‘impacts’ include impacts of the project on the environment, and impacts of the environment on the project due to environmental hazards and environmental change processes;
* ‘environmental hazards’ include hazards that are natural (e.g. cyclone, flood, earthquake), human-induced (e.g. oil spill) or technological (e.g. infrastructure failure);
* ‘environmental change processes’ include climate change; and
* ‘mitigation/management measures’ include climate change adaptation measures.

|  |
| --- |
| **EIA REPORT – TERMS OF REFERENCE** |
| **Section 1 – Executive summary**Present a concise, non-technical outline of the proposed project and each chapter of the EIA report. Include the results of impact and risk assessments, the proposed management/mitigation actions, and the conclusions reached. Translate the executive summary into relevant local language(s) to support community interest and participation in the EIA process. |
| **Section 2 – Table of contents** |
| **Section 3 – Glossary, list of acronyms/abbreviations** |
| **Section 4 – Introduction** Provide an overview of the project and the proponent, including information such as:4.1 Project name, background and general description* 1. Project purpose and objectives (including environmental performance objectives)
	2. Profile of project proponent

4.4. Contact details for the proponent/project manager  |
| **Section 5 – Policy and legal framework**Outline relevant policies and laws that apply to the project and the approvals that need to be obtained from different government agencies, for instance: * 1. National, regional, provincial or customary laws and related government approvals
	2. Multilateral Environmental Agreements
	3. Industry sector plans, policies or codes of practice
	4. Health, safety, hazard and risk management standards
	5. Current agreements between government and the proponent
	6. Environmental policies of any financing organisations involved in the project
	7. The proponent’s environmental management and compliance record
 |
| **Section 6 – Project description and justification**Present a detailed description of the project and provide justification for its development, covering:* 1. Project details
* Project location, size and layout, including a description of the project’s proximity to relevant environmental features and resources (e.g. watercourses, resource deposits, towns/villages/settlements, transport infrastructure, natural/cultural/ecological assets)
* Maps of the project location, surrounding area and project site, illustrating relevant environmental features and resources (e.g. topography, existing land/sea use, watercourses, resource deposits, towns/villages/settlements, transport infrastructure, natural/cultural/ecological assets)
* Project activities, components, infrastructure and design, including technology and equipment likely to be used
* Predicted resource and public infrastructure requirements, including rates of extraction or usage (e.g. energy, water, labour, transport, minerals, hazardous materials), and any competition for resources or infrastructure that may occur with other projects or the local community
* Predicted type and quantity of waste outputs (e.g. liquid and solid wastes, gas/air emissions)
* Implementation schedule, with key steps and tasks (e.g. timeline for construction, operation, decommissioning, rehabilitation, closure), and expected project lifespan
* Project cost estimates and funding sources, including any uncertainties or assumptions underlying the estimates
	1. Analysis of alternatives
* Alternative project sites, designs, technologies, timelines; including alternatives that address environmental hazards and environmental change processes
* Advantages and disadvantages of alternatives (e.g. cost, availability of technology)
* Explanation for choice of preferred options
	1. Project benefits
* Benefits accruing to the local area, island, country, region (e.g. new or upgraded physical infrastructure, improved environmental conditions, increased resource availability, employment/livelihood opportunities, improved standards of living, better health or educational facilities)
* Project relevance in the light of existing local or national development and/or future development plans
* Contribution to sustainable development and green growth
* The need for the project
	1. Cost-benefit analysis
* Identification, valuation and comparison of the costs (disadvantages) and benefits (advantages) of the project, from a whole-of-society perspective (i.e. including the perspectives of the proponent, government and stakeholders)
 |
| **Section 7 – Description of the baseline environment**Detail baseline (i.e. current or existing) environmental conditions relevant to the project and surrounding area, to develop awareness and understanding of important environmental features, patterns and trends; to support identification of potential impacts of the project on the environment (section 8) and potential impacts of the environment on the project (due to environmental hazards and environmental change, including climate change) (sections 9 and 10); and to assist with the formulation of impact mitigation measures. The level of examination and effort that is required to adequately describe different aspects of the environment will depend on the type of project, its scale of operation, its physical setting and its area of influence.In detailing the baseline environment it is important to state what is known or unknown, what assumptions have been made, and how reliable the data/information is. Studies or surveys undertaken by the proponent, their consultant, or third party researchers, should be adequately detailed and referenced (section 16). Where relevant, the following aspects of the environment should be described: * 1. Climate (e.g. temperature, rainfall/evaporation, flooding, drought, winds, extreme weather events, climate change projections and climate change elements likely to affect the project)
	2. Topography, geology and soils (e.g. significant landscape features and characteristics; landscape gradient or slope; land capability and availability; seismic characteristics and earthquake and volcanic potential; areas vulnerable to landslides, rock fall, erosion)
	3. Land tenure, zoning and use, underlying and surrounding the project (e.g. community food gardens, agriculture, national park, sensitive habitat, community reserve, village settlement, cemetery, manufacturing industry)
	4. Water (e.g. surface and groundwater quantity and quality; site hydrology; local catchment area; upstream and downstream water uses/users; areas vulnerable to flooding, inundation or storm surges)
	5. Marine (e.g. coastal hydrology, tides, waves, currents, storm surge, salinity, sea water temperature, suspended load, seabed bathymetry)
	6. Air (e.g. existing sources of air emissions; ambient air quality parameters such as nitrogen dioxide, sulphur dioxide, carbon monoxide, lead, PM10 particles; location of nearest sensitive receptors)
	7. Noise (e.g. baseline noise levels and noise pollution; location of nearest sensitive receptors)
	8. Plant life (e.g. plant species and communities within the project and surrounding area; native, endemic, threatened, invasive or culturally-significant species; areas subject to previous habitat clearing or disturbance; species, plant communities or habitat vulnerable to environmental hazards and environmental change)
	9. Animal life (e.g. animal species and communities within the project and surrounding area; native, endemic, threatened, migratory, invasive or culturally-significant species; habitat within and adjacent to the project area suitable for species of conservation significance; species, animal communities or habitat vulnerable to environmental hazards and environmental change)
	10. Human communities (e.g. towns/villages/settlements; population and local demographics; housing; energy and water resource; transport and other infrastructure; cultural traditions and community structure; marginalised groups; community health status; health care facilities; landscape and visual amenity; recreation; elements of human communities vulnerable to environmental hazards and environmental change)
	11. Local and national economy (e.g. skills, livelihoods and employment; economic and business conditions; distribution of income; major sectors and industries; elements of the economy vulnerable to environmental hazards and environmental change)
	12. Social/cultural resources and heritage (e.g. objects or sites of social/cultural significance, cultural and archaeological assets; social/cultural resources vulnerable to environmental hazards and environmental change)
 |
| **Section 8 – Impact assessment** 8.1 Assess and describe potential impacts of the project on the environment. The impact assessment should detail negative and positive; immediate, short-term and long-term; unavoidable, irreversible and reversible impacts. In conducting the impact assessment give consideration to:* all relevant aspects of the environment (section 7, description of the existing environment) and how they are likely *to be changed or affected by the project*, either directly or indirectly. This should include assessment of how the project may exacerbate environmental hazards and environmental change processes (e.g. release of greenhouse gas emissions, contributing to climate change)
* the nature of changes or affects, including negative consequences and/or expected benefits
* over what area, or on what scale, changes or affects are likely to take place
* changes or affects that will arise at different stages of the project (e.g. during construction, operation, production, decommissioning, closure)

8.2 Assess and describe potential impacts of the environment on the project. The impact assessment should detail negative and positive; immediate, short-term and long-term; unavoidable, irreversible and reversible impacts. In conducting the impact assessment give consideration to:* all relevant environmental hazards, and how they are likely *to change or affect the project*, either directly or indirectly (e.g. weather-related hazards such as heavy rain, cyclones; water-related hazards such as flooding, tidal waves; geological hazards such as landslides, ground failure, earthquakes, tsunami)
* environmental change processes, and how they are likely *to change or affect the project*, either directly or indirectly (e.g. climate change and associated processes such as sea level rise, increased cyclone intensity; loss of land from coastal erosion and shoreline change)
* the nature of changes or affects, including negative consequences and/or expected benefits
* over what area, or on what scale, changes or affects are likely to take place

Explain the methods used for impact assessment, such as modelling studies, site or field-based surveys, or review of existing similar situations or previous studies.In detailing impacts it is important to acknowledge what is known or unknown, what assumptions have been made, how reliable the data and analyses are, and whether any information deficiencies or uncertainties have influenced the conclusions reached. |
| **Section 9 – Cumulative impacts** Examine the project in the context of previous, existing and reasonably foreseeable future developments. This will help to ensure that the project’s potential impacts are not considered in isolation and that cumulative impacts are identified as far as possible. Cumulative impact assessment can include an evaluation of changes in:* 1. Land and seascape processes and functions (e.g. landscape hydrology, coastal stability)
	2. Natural resource quality and availability (e.g. water, energy, habitat for important plant and animal species)
	3. Social and community dynamics (e.g. size of human population, traffic volumes)
	4. Economic conditions (e.g. industry development, job opportunities, cost of living)

For identified cumulative impacts, assess if they will be permanent. If they are not likely to be permanent, specify what steps will be taken to minimise their long-term effects.  |
| **Section 10 – Environmental management** Provide a draft environmental management plan (EMP), including a detailed discussion of the mitigation measures that can be feasibly undertaken, and explain how these mitigation measures will address or reduce the anticipated negative impacts and reduce exposure or vulnerability to environmental hazards and environmental change processes. Also identify any best practices or industry standards the proponent intends to commit to, as well as any optimisation measures to be taken to strengthen or enhance positive impacts. The draft EMP should cover all phases of the project, from construction through to operation, decommissioning, closure and post-closure (where relevant). It should be further developed and refined following the conclusion of the EIA process. Provision should also be made for periodic review of the EMP once the project becomes operational. Recommended topics to be included in the EMP document:* 1. Environmental performance objectives for the project
	2. The proponent’s environmental management framework, i.e. who will have responsibility for overseeing the EMP, the implementation of different mitigation measures, incident response, environmental monitoring and reporting
	3. Specialised management plans with a high level of operational detail for sensitive or high-risk aspects of the project (e.g. a waste management plan, a water management plan, an erosion and sediment control plan, a disaster management plan, climate change adaptation plan)
	4. Evidence that environmental mitigation measures and specialised management plans are likely to be effective when implemented
	5. A detailed monitoring plan, including performance criteria for measuring the extent of environmental impacts, and/or the success of mitigation measures; and for ensuring early detection of impacts. Monitoring should cover impacts of the project on the environment and impacts of the environment on the project
	6. Environmental management expectations and requirements to be placed on project contractors
	7. Provisions for independent auditing (especially in the case of high-risk projects)
	8. The names of the government agencies the proponent will report their project activity outcomes and monitoring results to
	9. Staffing and equipment requirements, allocated budget, and any training programmes or capacity development necessary to ensure successful EMP implementation
	10. A process for responding to unanticipated or emergency incidents
	11. A process for managing and responding to stakeholder concerns or complaints
	12. Compensation measures for affected parties for impacts that cannot be mitigated or adequately managed

It is advisable to cross-reference different elements of the EMP to relevant text in the EIA report.  |
| **Section 11 – Local community, land/resource owner and wider stakeholder consultation**Supply details of consultation activities, including:* 1. How the local community, land/resource owners and other stakeholders have been identified
	2. Meetings, workshops or other forms of consultation held to date, or to be organised in the future
	3. The outcomes of consultation, including issues and concerns raised by different groups or affected parties
	4. Proposals for addressing issues and concerns raised, and for keeping the local community, land/resource owners and other stakeholders informed of project activities
 |
| **Section 12 – Conclusions and recommendations**Present the main conclusions of the EIA report and the proponent’s suggested recommendations for progressing their project, including key environmental management and mitigation measures that should be undertaken. |
| **Section 13 – Disclosure of consultants**State the names and contact details of all consultants responsible for preparing the EIA report, and the services or work they completed.  |
| **Section 14 – References**Appropriately reference all information sources that have been used or consulted during EIA report preparation (e.g. using the Harvard referencing system). Information sources may include studies or surveys undertaken by the proponent, their consultant, or third party researchers. |
| **Section 15 – Appendices**Include appendices that support the main text and that do not contain unnecessary information. Appendices may present:* Relevant environmental studies and reports
* Detailed technical information
* Draft management plans
* A table listing how the TOR have been addressed, cross-referenced to relevant sections of the EIA report
* A table listing environmental mitigation/management commitments made by the proponent
* Evidence of project support from stakeholders
 |
| **GENERAL ADVICE FOR EIA REPORT PREPARATION*** The EIA report should be based on a level of analysis and detail that reflects the significance of the project’s potential environmental impacts, and that allows government and interested stakeholders to clearly understand the project’s likely environmental consequences
* Information provided in the report should be objective, clear and easily understood by the general reader
* Different sections of the TOR may be combined or re-ordered, if this helps to present information in a clear and logical manner
* Maps, plans and diagrams should be prepared using an appropriate scale, resolution and clarity
* Technical jargon should be avoided or accompanied by a clear, understandable explanation
* Cross-referencing should be used to avoid unnecessary duplication of text
* Key project impacts should be explained in a culturally-appropriate format, using graphics and illustrations to assist with interpretation, where relevant
* Spatial data presented in the report should be provided to government as importable Geographic Information System shape files
 |

## Tool 3:EIA report review template

This tool has been designed to guide the EIA report reviewer and to help them determine if the EIA report contains sufficient information and detail, and meets an acceptable standard; what key issues and impacts the EIA report highlights for the development; and what recommendations or recommended conditions should be provided to the approval agency.

The order in which the review questions are presented in the template may not follow the order in which information is presented in the EIA report. Sometimes a reviewer will need to move back and forth between the template questions during the review process.

If a question is irrelevant to a project it is appropriate to write ‘N.A.’ (not applicable) in the second column (for Section 2). The relevance of questions may depend on the nature, scale and location of a project, and potential impacts associated with the project.

The key to conducting a good EIA review is to *examine the EIA report side-by-side with the TOR* and to:

* identify issues and ask questions about the nature of the project and its impacts;
* take notes and record comments, especially regarding any issues and questions that arise; and
* carefully consider significant issues and impacts that will have a bearing on project approval.

The following definitions are important for the TOR template:

* ‘environment’ includes environmental (natural and physical environment), social (people, culture, health, heritage, aesthetics, amenity) and economic aspects, as well as the relationships between these different aspects;
* ‘impacts’ include impacts of the project on the environment, and impacts of the environment on the project due to environmental hazards and environmental change processes;
* ‘environmental hazards’ include hazards that are natural (e.g. cyclone, flood, earthquake), human-induced (e.g. oil spill) or technological (e.g. infrastructure failure);
* ‘environmental change processes’ include climate change; and
* ‘mitigation/management measures’ include climate change adaptation measures.

|  |
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| **TEMPLATE – EIA REPORT REVIEW** |
| **Section 1 – Project details** |  |
| Project reference no. |  |
| Project name |  |
| Project proponent (developer) |  |
| Proponent’s email address |  |
| Proponent’s phone number |  |
| Project location (including coordinates, if available) |  |
| Type and purpose of project (brief description) |  |
| **Section 2 – General questions: assessing the comprehensiveness and adequacy of the EIA report**  |
| *Question(s)* | *Yes/no/N.A./brief description* | *Is follow-up required with the proponent (Y/N)? If so, briefly explain the follow-up required* |
| 2.1 Is the executive summary clearly written, does it cover the main impacts and findings, and has it been translated into relevant local language(s)? (This is important for ensuring the local community is aware of the project) |  |  |
| 2.2 Is a copy of the TOR provided with the EIA report? Does the EIA report adequately address the TOR?  |  |  |
| 2.3 Is the information clearly and logically presented and able to be understood by decision makers and stakeholders? (Important to check if the text is clearly written and the maps/diagrams are high-quality) |  |  |
| 2.4 Is the information relevant and sufficient for the purpose of decision-making and setting conditions for development approval? (This question is important for determining if an EIA report can be accepted) |  |  |
| 2.5 Is the boundary of the project site clear and accurate? (An incorrect boundary may result in incomplete and/or inaccurate conclusions in the EIA report) |  |  |
| 2.6 Are the purpose(s) and objectives of the project explained so the reader can easily understand what the project is about and what it hopes to achieve? |  |  |
| 2.7 Is there an adequate description of the project’s scale/size, design, activities, components, infrastructure and schedule/timeframe? (The project should be described in enough detail so the reader can understand how the project will be constructed, how and over what timeframe it will operate, and what goods/services it will produce. The description should include diagrams, plans, maps, activity schedules) |  |  |
| 2.8 Is the expected rate of production described? (This is particularly important for industrial/manufacturing/processing plant projects) |  |  |
| 2.9 Is there sufficient description of the resources and public infrastructure required by the project during construction and operation? (This description should include where the resources/infrastructure will be sourced from and how they will be transported to the project site, if they are being sourced off-site) |  |  |
| 2.10 Are the expected types and quantities of waste outputs described? (e.g. liquid and solid wastes, gas/air emissions) |  |  |
| 2.11 Are the important aspects of the baseline environment clearly identified and described, and is the information relevant to the project site and surrounding area? (Important aspects may include areas or features of particular biological, ecological, social, cultural or economic significance; and climate change scenarios and projections) |  |  |
| 2.12 Are reliable information sources used to describe the baseline environment? (e.g. well-designed field surveys conducted by the proponent or consultant; existing data; reliable studies conducted by other researchers; maps of the project area, including environmental hazard maps) |  |  |
| 2.13 Is there adequate identification and description of all potential impacts the project will have on the environment? (This description should cover all likely, significant impacts arising from the project, including negative and positive; immediate, short-term and long-term impacts. The magnitude of the impacts should be estimated, where possible) |  |  |
| 2.14 Is there adequate identification and description of all potential impacts the environment will have on the project, due to environmental hazards and environmental change processes? (This description should cover all likely, significant impacts arising from the environment, including negative and positive; immediate, short-term and long-term impacts. The magnitude of the impacts should be estimated, where possible) |  |  |
| 2.15 Has a draft environmental management plan (EMP) been developed that describes suitable mitigation measures for addressing all significant negative impacts? (This should include impacts of the project on the environment, and impacts of the environment on the project. Impacts that cannot be addressed through mitigation measures should be identified, and compensation measures should be proposed, where appropriate. Implementation steps should be clearly outlined for all mitigation measures) |  |  |
| 2.16 Does the EMP include optimisation measures for enhancing significant positive impacts? (This should include impacts of the project on the environment, and impacts of the environment on the project) |  |  |
| 2.17 Does the EMP include a monitoring plan for measuring the extent of impacts and the success of mitigation measures? |  |  |
| 2.18 Has a risk assessment been conducted to assess the relative significance of different impacts, and to help prioritise the management of significant negative impacts? |  |  |
| 2.19 Have feasible alternatives to the proposed project been adequately considered and evaluated? (This may cover alternative sites, designs, technologies, timelines) |  |  |
| 2.20 Has adequate consultation been conducted with the local community, land/resource owners and other relevant stakeholders? (The report should outline who was consulted, when and how they were consulted, and how the proponent has responded to concerns and issues raised during consultation)  |  |  |
| 2.21 Does the project adhere to government legislation, regulations, policies or guidelines? |  |  |
| 2.22 Is the project relevant to any MEA commitments or obligations, and do these need to be factored into the development approval?  |  |  |
| 2.23 Have all data sources been identified and a list of references provided? |  |  |
| **Section 3 – Identification of specific issues (the issues can relate to impacts of the project on the environment and impacts of the environment on the project)** |
| *Section & page no.* | *Identified issue(s)* | *Comment(s)/question(s) relating to the issue(s)* | *Is/are the issue(s) dealt with in the environmental management section or another part of the EIA report? If so, does this address your comments and questions (Y/N)?* | *Is follow-up required with the proponent on the identified issue(s) (Y/N)? If so, briefly explain the follow-up required* | *Should the issue(s) be considered as part of the development approval and/or the approval conditions (Y/N)? If so, briefly explain why* |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **Section 4 – Other comments** |
| * ...........................
* ...........................
* ...........................
* ...........................
* ...........................
* ...........................
* ...........................
 |

**Recommendation:**

* **EIA report accepted. The following recommendations and conditions should be considered by the development approval agency:**

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* **EIA report not accepted. The following issues need to be addressed in the revision of the EIA report:**

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**Reasons for recommendation:**

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**Name(s) of reviewing officer(s): Signature(s): Date:**

**Job title(s): Ministry/Department:**

## Tool 4:Risk assessment – an example approach

Risk assessment is a systematic approach used as part of the EIA process to examine the *consequences*, *probability* of occurrence, and relative *significance* of: a development’s potential negative impacts on the environment; and the potential negative impacts of the environment on a development. Risk assessment uses explicit criteria, a defined rating methodology, and qualitative and quantitative evaluation to examine and classify negative impacts and to help prioritise their management. Given there is often uncertainty surrounding potential impacts, risk assessment helps to bring some precision to the process of deciding on impact mitigation and management strategies.

In recent years different risk assessment approaches have been developed and applied to projects undergoing EIA, especially large-scale projects e.g. mining and energy developments. A method developed by SRK Consulting[[22]](#footnote-22) has been adapted for the Pacific context and is outlined below, to provide an example of a risk assessment approach. The outline includes an assessment of four impacts to demonstrate how the approach can be incorporated into EIA reports. The impacts are: (1) soil erosion during project construction; (2) pumping of wastewater into the ocean during project operation; (3) degradation of a cultural heritage site; and (4) storm surge and flooding of development and surrounds, closing down operations.

The benefits of incorporating risk assessment in an EIA report are that it provides a clear and concise summary of technical information and analyses; highlights the likely future consequences of development choices; and helps stakeholders to understand why particular management measures need to be put in place. Limitations sometimes experienced with risk assessment include, terms and concepts being interpreted differently by different people, leading to different risk assessment results; cumulative impacts not being easily accounted for; and some impacts being difficult to assign to discrete categories.

In writing up risk assessment results it is important to clearly outline the rationale for assigning different ratings; to provide appropriate justification where the consequence or probability of an impact is expected to be reduced as a result of proposed mitigation measures; and to highlight any constraints, assumptions or uncertainties that influence the assessment.

EIA report writers need to remember that risk assessment can help with making judgments about how to deal with impacts but it cannot be used to make judgments about the acceptability of impacts. The acceptability of impacts will depend on the values and preferences held by stakeholders, including the local community and local land/resource owners affected by a development.

**RISK ASSESSMENT METHOD**

**STEP 1:** Assign a rating and score for each of the three criteria (A-C) listed in the table below, and then add the scores to determine the *consequence* rating for an impact.

|  |  |  |
| --- | --- | --- |
| **RATING** | **DEFINITION OF RATING** | **SCORE** |
| 1. ***Extent*** *– the area over which the impact will be experienced*
 |
| Local | Confined to the project site or study area  | 1 |
| Wider catchment or province  | Extends beyond the project site to the wider, surrounding area | 2 |
| Island or national | Extends to the whole island or nation | 3 |
| Regional or global  | Extends to the Pacific region and potentially beyond | 4 |
| 1. ***Intensity*** *– the magnitude of the impact i.e. whether the impact will result in minor, moderate or major environmental, economic and social (including human health) changes*
 |
| Low | Minor or negligible changes, disturbances, damages, injuries or health effects. Likely to generate minimal interest or concern amongst the local community/affected stakeholders. Examples: dust and exhaust gases from construction machinery; temporary or single exceedance of a pollution limit or threshold; first aid cases; minor discomfort or irritation from construction noise; increased traffic on local roads to transport construction materials to project site. | 1 |
| Medium | Moderate changes, disturbances, damages, improvements, injuries or health effects. Likely to generate more prolonged interest or concern amongst the local community/stakeholders. Examples: generation of hazardous waste; large fish kill incident; frequent exceedance of a pollution limit or threshold; clearance of food gardens; influx of workers from overseas for project construction; moderate disruption of daily life/work activities; intermittent production of foul odour near village; infrastructure damage from flooding or strong winds. | 2 |
| High | Major or severe changes, disturbances, damages, improvements, injuries or health effects. Likely to generate widespread and intense interest or controversy amongst local, national and regional communities/stakeholders. Examples: clearance of endangered species habitat; drawdown of limited groundwater supplies; large increase in suspended sediment levels from dredging; destruction of cultural artefacts; forced relocation of village settlements; permanent disabilities or fatalities; loss of coastal buildings and infrastructure due to extreme weather events. | 3 |
| ***C. Duration*** *– the timeframe over which the impact will be experienced and its reversibility* |
| Short-term | Up to 2 years – impact is reversible or limited to when particular development activities or environmental events are taking place. Remediation or recovery is possible  | 1 |
| Medium-term | 2 to 15 years – impact is reversible or limited to when particular development activities or environmental events are taking place. Remediation or recovery is possible  | 2 |
| Long-term | More than 15 years – impact is permanent or gradually reversible with sustained remediation and recovery efforts  | 3 |

The combined score of the three criteria (extent, intensity, duration) corresponds to a *consequence* rating, as follows:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Combined score (A+B+C)** | 3-4 | 5-6 | 7 – 8 | 9 – 10 |
| ***Consequence* rating** | Minor | Moderate | Major | Massive |

**Step 1 examples**

(Note, there are no units of measurement attached to the example impacts, so they should be viewed as illustrative examples only)

1. Soil erosion during project construction:

|  |  |  |  |
| --- | --- | --- | --- |
| Extent | Intensity | Duration | ***Consequence*** |
| Local1 | Medium2 | Short-term1 | Minor4 |

1. Pumping of wastewater into the ocean during project operation:

|  |  |  |  |
| --- | --- | --- | --- |
| Extent | Intensity | Duration | ***Consequence*** |
| Wider catchment 2 | High3 | Medium-term 2 | Major7 |

1. Degradation of a cultural heritage site:

|  |  |  |  |
| --- | --- | --- | --- |
| Extent | Intensity | Duration | ***Consequence*** |
| Local1 | High3 | Long-term3 | Major7 |

1. Storm surge and flooding of development and surrounds, closing down operations:

|  |  |  |  |
| --- | --- | --- | --- |
| Extent | Intensity | Duration | ***Consequence*** |
| Wider catchment 2 | High3 | Medium-term2 | Major7 |

**STEP 2:** Assess the *probability* of the impact occurring according to the following definitions:

|  |
| --- |
| ***Probability*** – the likelihood of the impact occurring |
| Improbable  | < 40% chance of occurringUnlikely to occur during project lifetime |
| Possible  | 40% *–* 70% chance of occurringMay occur during project lifetime |
| Probable  | > 70% *–* 90% chance of occurringLikely to occur during project lifetime |
| Definite | > 90% chance of occurringLikely to occur more than once during project lifetime |

**Step 2 examples**

1. Soil erosion during project construction:

|  |
| --- |
| ***Probability*** |
| Probable |

1. Pumping of wastewater into the ocean during project operation:

|  |
| --- |
| ***Probability*** |
| Possible |

1. Degradation of a cultural heritage site:

|  |
| --- |
| ***Probability*** |
| Definite |

1. Storm surge and flooding of development and surrounds, closing down operations:

|  |
| --- |
| ***Probability*** |
| Probable |

**STEP 3:** Determine the overall *significance* of the impact as a combination of the *consequence* and *probability* ratings, as set out in the matrix below:

|  |  |
| --- | --- |
|  | ***Probability of occurrence*** |
| Improbable  | Possible  | Probable  | Definite |
| ***Consequence of impact*** | Minor | VERY LOW | VERY LOW | LOW | LOW |
| Moderate | LOW | LOW | MEDIUM | MEDIUM |
| Major | MEDIUM | MEDIUM | HIGH | HIGH |
| Massive | HIGH | HIGH | VERY HIGH | VERY HIGH |

**Step 3 examples**

1. Soil erosion during project construction:

|  |  |  |
| --- | --- | --- |
| ***Consequence*** | ***Probability*** | ***Significance*** |
| Minor | Probable | LOW |

1. Pumping of wastewater into the ocean during project operation:

|  |  |  |
| --- | --- | --- |
| ***Consequence*** | ***Probability*** | ***Significance*** |
| Major | Possible | MEDIUM |

1. Degradation of a cultural heritage site:

|  |  |  |
| --- | --- | --- |
| ***Consequence*** | ***Probability*** | ***Significance*** |
| Major | Definite | HIGH |

1. Storm surge and flooding of development and surrounds, closing down operations:

|  |  |  |
| --- | --- | --- |
| ***Consequence*** | ***Probability*** | ***Significance*** |
| Major | Probable | HIGH |

**STEP 4**: State the level of *confidence* in the assessment of the impact as high, medium or low. The level of confidence will depend on the extent and type of information available, whether it is qualitative or quantitative, and whether it is based on direct measurements, extrapolated data, estimations or expert opinion.

**Step 4 examples**

1. Soil erosion during project construction – *high*
2. Pumping of wastewater into the ocean during project operation – *medium*
3. Degradation of a cultural heritage site – *high*
4. Storm surge and flooding of development and surrounds, closing down operations – *high*

**STEP 5**:

5(a) – identify and describe practical mitigation measures that can be effectively implemented to reduce the impact.

5(b) – assume mitigation measures have been implemented and reassess the impact, by following steps 1 to 4 again. The point of the second assessment is to examine how impact extent, intensity, duration and/or probability change, after mitigation.

**Step 5 examples**

1. Soil erosion during project construction:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Extent** | **Intensity** | **Duration** | **Consequence** | **Probability** | **Significance** | **Confidence** |
| **Without mitigation** | Local1 | Medium2 | Short-term1 | Minor4 | Probable | LOW | *High* |
| **Mitigation measures:*** Preparation of a site-specific erosion and sediment control plan (ESCP)
* ESCP to include measures such as: minimising land disturbance and clearing the smallest area of land practicable; staging the land clearing activities to minimise area exposed at any one time; installing a silt fence along the boundaries of the construction site; managing surface flows upstream of project area; vegetating topsoil stockpiles as soon as possible; checking erosion and sediment controls daily and after rain
 |
| **With mitigation** | Local1 | Low1 | Short-term1 | Minor3 | Improbable | VERY LOW | *High* |

1. Pumping of wastewater into the ocean during project operation:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Extent** | **Intensity** | **Duration** | **Consequence** | **Probability** | **Significance** | **Confidence** |
| **Without mitigation** | Wider catchment 2 | High3 | Medium-term 2 | Major7 | Possible | MEDIUM | *Medium* |
| **Mitigation measures:*** On-site wastewater collection and storage
* Wastewater to be transported to provincial wastewater treatment facility
* Monthly inspections of wastewater storage structures and transport vehicles to ensure there are no leakages
* Inspection of wastewater storage structures and transport vehicles following extreme weather events
 |
| **With mitigation** | Wider catchment 2 | Low1 | Medium-term 2 | Moderate5 | Improbable | VERY LOW | *Medium* |

1. Degradation of a cultural heritage site:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Extent** | **Intensity** | **Duration** | **Consequence** | **Probability** | **Significance** | **Confidence** |
| **Without mitigation** | Local1 | High3 | Long-term3 | Major7 | Definite | HIGH | *High* |
| **Mitigation measures:*** Alert local chiefs of discovery of cultural heritage artefacts
* Safely collect cultural heritage artefacts, with guidance from local chiefs and an archaeologist, and provide to the national museum
* Provide long-term (50 years) financial support for upkeep of the cultural heritage exhibit at the national museum
 |
| **With mitigation** | Local1 | Medium2 | Long-term3 | Moderate6 | Definite | MEDIUM | *Medium* |

1. Storm surge and flooding of development and surrounds, closing down operations

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Extent** | **Intensity** | **Duration** | **Consequence** | **Probability** | **Significance** | **Confidence** |
| **Without mitigation** | Wider catchment 2 | High3 | Medium-term2 | Major7 | Probable | HIGH | *High* |
| **Mitigation measures:*** Essential buildings and infrastructure to be set-back 100 m from coast and built on raised platforms
* Revegetation of coastal zone with mangroves and other native vegetation
* Generator to be on-hand for back-up power
 |
| **With mitigation** | Wider catchment 2 | Medium2 | Short-term1 | Moderate5 | Probable | MEDIUM | *Medium* |

**STEP 6**: Summarise all the impact assessment ratings in a single table that can be included in the executive summary or concluding section of an EIA report.

**Step 6 examples**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Impact** | **Consequence** | **Probability** | **Significance** | **Confidence** |
| Soil erosion during project construction | Minor | Probable | LOW | *High* |
| With mitigation | Minor | Improbable | VERY LOW | *High* |
| Pumping of wastewater into the ocean during project operation | Major  | Possible | MEDIUM | *Medium* |
| With mitigation | Moderate | Improbable | VERY LOW | *Medium* |
| Degradation of a cultural heritage site | Major  | Definite | HIGH | *High* |
| With mitigation | Moderate | Definite | MEDIUM | *Medium* |
| Storm surge and flooding of development and surrounds, closing down operations | Major  | Probable | HIGH | *High* |
| With mitigation | Moderate | Probable | MEDIUM | *Medium* |

# 7.0 Appendices

## Appendix 1: Legislation governing the application of EIA in Pacific Island Countries

|  |  |
| --- | --- |
| PIC | Legislation  |
| Cook Islands | * *Environment Act 2003*
 |
| Federated States of Micronesia | * *Environmental Protection Act* (National)
* *Environmental Impact Assessment Regulations* (National)
* *Environmental Quality Protection Act* (Yap)
* *Regulations for Development* (Kosrae)
* *Regulations for Environmental Impact Assessment* (Chuuk)
* *Environmental Impact Assessment Regulations* (Pohnpei)
 |
| Fiji | * *Environment Management Act 2005*
* *Environment Management (EIA Process) Regulations 2007*
 |
| Kiribati | * *Environment Act 1999*
* *Environment (General) Regulation 2008*
 |
| Nauru | No legislation enacted |
| Niue | * *Environment Act 2003*

(N.B. this Act does not provide substantive provisions for EIA; it envisages that EIA Regulations will be developed to provide an appropriate legal foundation for the application of EIA.) |
| Palau | * *Environmental Quality Protection Act 1981*
* *Environmental Impact Statement Regulations 1996*
 |
| Papua New Guinea | * *Environment Act 2000*
* *Environment (Permits) Regulation* 2002
* *Environment (Prescribed Activities) Regulation* 2002
 |
| Republic of the Marshall Islands | * *National Environmental Protection Act 1984*
* *Environmental Impact Assessment Regulations 1994*
 |
| Samoa | * *Planning and Urban Management Act 2004*
* *Planning and Urban Management (Environmental Impact Assessment) Regulations 2007*
 |
| Solomon Islands | * *Environment Act 1998*
* *Environment Regulations 2008*
 |
| Tonga | * *Environmental Impact Assessment Act 2003*
* *Environmental Impact Assessment Regulations 2010*
 |
| Tuvalu | * *Environment Protection Act 2008*
* *Environment Protection (Environmental Impact Assessment) Regulations 2014*
 |
| Vanuatu | * *Environmental Management and Conservation Act 2002*
* *Environmental Impact Assessment Regulations 2011*
 |

## Appendix 2: Environmental governance instruments relevant to EIA

|  |  |  |
| --- | --- | --- |
| Level of governance | Type of governance | Example instruments  |
| International  | MEAPolicy, plan or programme | Convention on Wetlands of International Importance (Ramsar Convention)Convention on Biological DiversityConvention on the Conservation of Migratory Species of Wild AnimalsConvention on International Trade in Endangered Species of Wild Fauna and FloraUnited Nations Framework Convention on Climate ChangeKyoto Protocol to the UNFCCCLondon Convention for the Prevention of Marine Pollution by Dumping of Wastes and Other MatterInternational Convention for the Prevention of Pollution from Ships (MARPOL)International Convention on Oil Pollution Preparedness, Response and CooperationInternational Convention for the Control and Management of Ships’ Ballast Water and SedimentsBasel Convention on the Control of Hazardous Wastes and their DisposalVienna Convention for the Protection of the Ozone LayerMontreal Protocol On Substances that Deplete the Ozone LayerRotterdam ConventionStockholm ConventionUnited Nations Convention to Combat DesertificationUnited Nations Convention on the Law of the SeaDonor policies and programmes (e.g. World Bank, Asian Development Bank) |
| Regional  | MEAPolicy, plan or programme | Convention on the Protection of Natural Resources and the Environment of the South Pacific (Noumea Convention)Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and management of Hazardous Wastes within the South Pacific Region (Waigani Convention)Strategy for Climate and Disaster Resilient Development in the PacificFramework for Nature Conservation and Protected Areas in the Pacific Islands Region Pacific Islands Regional Marine Species Programme Pacific Regional Solid Waste Management Strategy |
| National  | LegislationPolicy, plan or programme | Environmental Planning and Management (EIA) ActWaste Management and Pollution Control ActWater Resources Management ActNational Parks ActWildlife Conservation ActFisheries ActLand Use ActMining Management ActHealth and Safety at Work ActPublic Health ActNative Lands ActCustomary LawsNational Environmental Management Strategy National Green Growth and Sustainable Development Strategies National Climate Change PolicyJoint National Action Plan (for climate change adaptation and disaster risk management)National Biodiversity Strategy and Action Plan National Waste Management PlanNational Transport Plan National Health PlanFiscal and trade policies |
| Sub-national (provincial, district, municipality, community levels)  | Policy, plan or programme | Community-based environment plansClimate change vulnerability assessmentsClimate change adaptation plansDisaster risk management plans Local strategic land use plans |

1. Relevant MEAs include the Convention for the Protection of the Natural Resources and the Environment of the South Pacific Region (Noumea Convention); the Agreement Establishing the South Pacific Regional Environment Programme; the Rio Declaration on Environment and Development; the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change. [↑](#footnote-ref-1)
2. Publications include: *How to Assess Environmental Impacts on Tropical Islands and Coastal Areas: South Pacific Regional Environment Programme Training Manual* (Carpenter and Maragos 1989); *A Guide to Environmental Impact Assessment in the South Pacific* (Morgan 1993); *Environmental Impact Assessment Guidelines for Mine Development and Tailings Disposal at Tropical Coastal Mines* (Ellis 1996); *Adapting to climate change in the Caribbean and South Pacific regions. Guide to the integration of climate change adaptation into the environmental impact assessment (EIA) process* (Caribbean Community [CARICOM] Secretariat, South Pacific Regional Environment Programme, Canadian International Development Agency 2004) [↑](#footnote-ref-2)
3. Environmental assessment publications can be accessed through SPREP’s Pacific Environment Information Network: <http://www.sprep.org/Pacific-Environment-Information-Network/lessons-learned-and-best-practices-in-environment-management> [↑](#footnote-ref-3)
4. Throughout the EIA Guidelines the terms ‘development project’, ‘development’ and ‘project’ are used interchangeably. [↑](#footnote-ref-4)
5. Sadler B. and McCabe M. (Eds) (2002) *Environmental Impact Assessment Training Resource Manual*. United Nations Environment Programme. Geneva.

Abaza H., Bisset R. and Sadler B. (2004) *Environmental Impact Assessment and Strategic Environmental Assessment: Towards an Integrated Approach*. United Nations Environment Programme. Geneva. [↑](#footnote-ref-5)
6. Caribbean Community Secretariat (2004) *Adapting to a Changing Climate in the Caribbean and South Pacific Regions. Guide to the Integration of Climate Change Adaptation into the Environmental Impact Assessment (EIA) Process*. CARICOM, South Pacific Regional Environment Programme, The World Bank, Gesellschaft für Internationale Zusammenarbeit, Canadian International Development Agency. [↑](#footnote-ref-6)
7. There is a third type of environmental assessment, Integrated Environmental Assessment (IEA), whose development has been led by the United Nations Environment Programme. IEA links the investigation of environmental states and trends with policy analysis. More specifically, it seeks to understand what is happening to the environment and why; what the consequences are for the environment and for humans; what actions or responses need to be taken to address the consequences; and how effective the actions and responses are likely to be. IEA is not addressed in these Guidelines because they are primarily focused on EIA capacity-building; however, IEA is being partially addressed through SPREP’s work with members on State of the Environment reporting. [↑](#footnote-ref-7)
8. Morgan R. K. (1993) A *Guide to Environmental Impact Assessment in the South Pacific*. South Pacific Regional Environment Programme, Apia, Western Samoa. (Prepared by Richard Morgan and assisted by K. Onorio, R. Odense, D. Hills, and A. Hutchison.)

Abaza H., Bisset R. and Sadler B. (2004) *Environmental Impact Assessment and Strategic Environmental Assessment: Towards an Integrated Approach*. United Nations Environment Programme. Geneva. [↑](#footnote-ref-8)
9. Voluntary guidelines on biodiversity-inclusive environmental impact assessment have been produced under the CBD, see: http://www.cbd.int/decision/cop/default.shtml?id=11042 [↑](#footnote-ref-9)
10. Dusik J. And Xie J. (2009) *Strategic Environmental Assessment in East and Southeast Asia. A Progress Review and Comparison of Country Systems and Cases*. The World Bank, Washington D.C. [↑](#footnote-ref-10)
11. Jackson T., Kelly A., Williams P. (2008) *Comparison of strategic environmental assessment in New South Wales and Scotland*. Proceedings for the 28th Annual Conference of the International Association for Impact Assessment, Perth Convention Exhibition Centre, Perth, Australia. Accessed 9/4/2015 at: http://www.iaia.org/iaia08perth/pdfs/concurrentsessions/CS4-11\_effectiveness\_Jackson.pdf [↑](#footnote-ref-11)
12. Onorio K. and Morgan R. K. (1996) *Strategic Environmental Assessment (SEA) Report: Neiafu Master Plan Vava’u, Kingdom of Tonga.* South Pacific Regional Environment Programme, Apia, Samoa. [↑](#footnote-ref-12)
13. Levett R. and McNally R. (2003) *A Strategic Environmental Assessment of Fiji’s Tourism Development Plan*. World Wide Fund for Nature. Accessed 22/5/2015 at: http://api.commissiemer.nl/docs/os/sea/casestudies/fiji\_tourism\_development\_plan\_0305\_wwf.pdf [↑](#footnote-ref-13)
14. Adapted from:

Abaza H., Bisset R. and Sadler B. (2004) *Environmental Impact Assessment and Strategic Environmental Assessment: Towards an Integrated Approach*. United Nations Environment Programme. Geneva.

Legislative Council Secretariat (2015) *Information Note: Strategic Environmental Assessment*. Accessed 22/5/15 at: http://www.legco.gov.hk/research-publications/english/1415in02-strategic-environmental-assessment-20150105-e.pdf [↑](#footnote-ref-14)
15. United Nations Environment Programme (2002) Topic 14 – Strategic Environmental Assessment, in: *EIA Training Resource Manual*. Accessed 22/5/2015 at: http://www.unep.ch/etu/publications/EIA\_2ed/EIA\_E\_top14\_body.PDF

Secretariat of the Convention on Biological Diversity and Netherlands Commission for Environmental Assessment (2006) *Biodiversity in Impact Assessment, Background Document to CBD Decision VIII/28: Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment*. Montreal, Canada.

Dusik J. And Xie J. (2009) *Strategic Environmental Assessment in East and Southeast Asia. A Progress Review and Comparison of Country Systems and Cases*. The World Bank, Washington D.C. [↑](#footnote-ref-15)
16. Adapted from:

Sadler B. and McCabe M. (Eds) (2002) *Environmental Impact Assessment Training Resource Manual*. United Nations Environment Programme. Geneva.

Secretariat of the Convention on Biological Diversity and Netherlands Commission for Environmental Assessment (2006) *Biodiversity in Impact Assessment, Background Document to CBD Decision VIII/28: Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment*. Montreal, Canada.

Dusik J. And Xie J. (2009) *Strategic Environmental Assessment in East and Southeast Asia. A Progress Review and Comparison of Country Systems and Cases*. The World Bank, Washington D.C. [↑](#footnote-ref-16)
17. These concepts are discussed in detail in:

[Roche C. and Bice S. (2013) Anticipating Social and Community Impacts of Deep Sea Mining. In Baker E. and Beaudoin Y. (Eds) *Deep Sea Minerals: Deep Sea Minerals and the Green Economy*, Vol. 2, pp. 59-80, Secretariat of the Pacific Community, Fiji.](http://www.mpi.org.au/wp-content/uploads/2014/05/Roche-and-Bice-2013-Anticipating-Social-and-Community-Impacts-of-Deep-Sea-Mining.pdf) [↑](#footnote-ref-17)
18. International Finance Corporation (2012) *Performance Standards on Environmental and Social Sustainability*. Accessed 19/5/2015 at: http://www.ifc.org/wps/wcm/connect/topics\_ext\_content/ifc\_external\_corporate\_site/ifc+sustainability/learning+and+adapting/knowledge+products/publications/publications\_handbook\_pps [↑](#footnote-ref-18)
19. Jasperse J. A., Buncle A., Pelesikoti N., Nakalevu T., Aiavao U. and Moorhead A. (2014) *Mainstreaming Climate Change into Development in the Pacific: A Practical Guide*. Secretariat of the Pacific Regional Environment Programme and United Nations Development Programme. [↑](#footnote-ref-19)
20. Buncle A., Daigneault A., Holland P., Fink A., Hook S. and Manley M. (2013) *Cost-Benefit Analysis for Natural Resource Management in the Pacific: A Guide*. Secretariat of the Pacific Regional Environment Programme, Secretariat of the Pacific Community, Pacific Island Forum Secretariat, Landcare Research and Gesellschaft für Internationale Zusammenarbeit. [↑](#footnote-ref-20)
21. Business and Biodiversity Offsets Programme (2015) *Mitigation Hierarchy*. Accessed 21/5/2015 at: <http://bbop.forest-trends.org/pages/mitigation_hierarchy> [↑](#footnote-ref-21)
22. SRK Consulting (2015) *Impact Assessment Methodology*. Accessed 25/5/15 at:

http://www.srk.co.za/files/File/South-Africa/publicDocuments/Annadale/November/443467\_annandale\_rd\_final\_bar\_app\_j\_ia\_method.pdf [↑](#footnote-ref-22)