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RSB ESIA (environmental and social impact assessment) Guidelines

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Note on the use of this document

These guidelines are designed to assist the operator complete an ESIA process where required by the RSB standard.

These guidelines may equally be used by auditors to get a better understanding of key-aspects to be considered during the RSB certification process.

This document does not serve as the basis for verification of compliance and audits of operators. This document is not a normative document.

These guidelines were developed in collaboration with:
Coastal & Environmental Services
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RSB ESIA (ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT) GUIDELINES

1 INTRODUCTION

There are instances in which a Participatory Operator (PO) is required to do an ESIA as part of the RSB impact assessment process. For a flow diagram that illustrates the full decision tree process of the RSB impact assessment process, please refer to the RSB document RSB-GUI—01-002-01. In order to determine if an ESIA is required the PO has to first complete the screening process, the guidelines of which can be found at RSB-GUI-01-002-02.

The following provides guidelines on when an ESIA is required :

- Operations on more than 1000 Ha of contiguous land (allowing for road and other infrastructure to break the contiguous nature) which is coming into production for the first time or has been out of production for over five years, are required to complete an ESIA, even if specialist studies are not triggered by the screening process.

Note: contiguous means that the farm is essentially one farm, and that the distances between fields are small. The contiguous nature can be broken by areas set aside for ecological conservation or management, rivers and dams, or for roads and infrastructure. The intention here is to differentiate between Pos that have large operations on one area and a PO that is made up a large number of smaller farms owned by small scale farmers or operations who have joined together for the purposes of RSB certification.

- An exception to the above is that if the PO has 1000 ha of contiguous land that will be used for biofuels, which has been in continuous use for agriculture for the past five years or more, and where the same crops and the same agriculture practices will be used for biofuel operations, these operators only need to complete an ESIA if the screening tool triggers more than 2 specialist studies.
- In all cases, regardless of size, where the screening process triggers more than 2 specialist impact assessments, an ESIA is required.
- If the screening process triggers two or less specialist impact assessments the PO must complete a RESA
- The PO must complete specialist impact assessments where they are triggered during the screening process

If the screening exercise indicates that there are a large number of less significant impacts across all of the criteria in the RSB standard, which need attention, these can be addressed within the ESIA or RESA if applicable or directly through and in the ESMP.

2 INTRODUCTION TO ESIAS

In the development sphere, an ESIA is required for any project classified by the World Bank or Asian Development Bank as a **Category A** project¹. The environmental and social assessment must examine the project's potential negative and positive impacts and compare them with those of feasible alternatives (including the "without Project" situation). The ESIA recommends measures needed to prevent, minimize, mitigate, or compensate for adverse impacts.

Stakeholder engagement activities must be undertaken at least twice during the ESIA process: once during the early stage (field studies) and then after the draft ESIA report has been released for public review.

Stakeholder engagement must be ongoing during implementation. Mitigation measures and proposed monitoring are incorporated into the ESMP.

The following locations for prospective projects suggest a Category A classification:

- (i) in or near sensitive and valuable ecosystems (e.g., protected areas, wetlands, wild lands, coral reefs, and habitats of endangered species);
- (ii) in or near cultural heritage sites (e.g. archaeological, historical sites or existing cultural sites);
- (iii) densely populated areas where resettlement may be required or degradation impacts and other disturbances may be significant;
- (iv) regions subject to heavy development or where there are conflicts in natural resource use and allocation;
- (v) watercourses, aquifer recharge areas, or reservoir catchments used for potable water supply or other livelihood activities; and
- (vi) lands, forests or waters containing valuable resources used for local livelihoods (e.g. fisheries, minerals, medicinal plants, prime agricultural soils).

The following are examples of potential environmental and social impacts suggesting a Category A classification.

- (i) permanent conversion of potentially productive or valuable resources used for local livelihoods and food security (e.g., fisheries, natural forests, wild lands);
- (ii) destruction of natural habitat and loss of biodiversity or environmental goods and services provided by a natural system;
- (iii) risk to human health and safety (e.g. from generation, storage, or disposal of hazardous wastes, inappropriate occupational health and safety measures, violation of ambient water or air quality standards);
- (iv) displacement of large numbers of people or businesses; and
- (v) absence of effective mitigation or compensation measures.

Environmentally and socially sensitive issues which require special attention during the ESIA or RESA process include the following:

- disturbance to forests,
- conversion of wetlands,
- potential adverse effects on protected areas/sites,
- encroachment on lands or rights of indigenous peoples or other vulnerable minorities,

¹ Category A Projects: Projects with potential significant adverse social or environmental impacts that are diverse, irreversible or unprecedented □□

- loss of natural resources critical to local livelihoods
- impacts on international waterways and other transboundary issues.

3 DESCRIPTION OF THE ESIA PROCESS

The Secretariat of the Convention on Biological Diversity has determined that, although the legislation varies around the world, an ESIA should follow the same basic process, as outlined in Figure 1 (SCBD 2006)²:

- 1) Screening.** This stage of the process is used to determine whether a full ESIA is needed, or if a Rapid Environmental Assessment (REA) will be sufficient for the proposed development or if specialist studies are required.
 - 1. Notification to the Competent Authority** – in some countries, the Competent Authority (CA) must be notified at this point in the ESIA process. In other countries it may be done voluntarily and informally. The RSB should be notified at this point of the intention of the PO to apply for certification so that all the relevant information can be handed over.
 - 2. Scoping.** This stage of the process develops a preliminary assessment of the impacts likely to occur as a result of the proposed development, and which should be dealt with in the ESIA. The scoping phase must involve stakeholder engagement to help identify issues. It must include the terms of reference for the specialist studies that will be required to address these issues in the ESIA. Compliance with these RSB Principles requires scoping and full disclosure of the Scoping Report.
 - 3. Environmental and Social studies** During this stage the specialist studies, as identified during the Scoping Phase, are conducted. Specialist studies are guided by the issues raised during scoping. They deal with the concerns of stakeholders.
 - 4. Assessment and evaluation of Impacts.** Impacts are evaluated to identify the likely environmental, social and other effects of the proposal. Alternatives are identified to establish the most environmentally sound and benign option for achieving proposal objectives. Evaluation occurs within the specialist studies of the ESIA.
 - 5. Reporting.** The findings are presented as an Environmental & Social Impact Report. This discusses mitigation and impact management (measures to avoid, minimize or offset adverse impacts). Where appropriate mitigation is incorporated into an environmental & social management plan (ESMP) or system. The reports must be clear and impartial and address stakeholder concerns.
 - 6. Review.** This should be conducted independently and assess whether the report complies with the Terms of Reference and stakeholder engagement during the impact assessment phase.
 - 7. Public Disclosure.** The ESIA Report (also known as the ESIR) must be made available to all stakeholders from government to NGOs and the general public for comment. This must be done before the final decision about the proposed development is made.
 - 8. Decision-making.** The decision on whether to permit a proposed biofuel project is usually made by the delegated authority in the host country. These authorities will review the final ESIA reports and consider whether the project and ESIA complies with regulations. In some

² These are also very similar to the operating principles developed by the IAIA, and these steps have been modified to include IAIA and RSB principles for best practice ESIA. They are largely based in IAIA, SCBD 2006 and European Union (2001)

developing countries the national ESIA regulations (if they exist) may be less demanding than the RSB principles. In addition, any biofuel developer wishing to obtain sustainability certification from the RSB will need to comply with RSB impact assessment requirements. There must be a consensus agreement between the affected and responsible stakeholders According to the RSB requirements

9. **Monitoring, compliance, enforcement and environmental auditing.** A party identified in the ESMP must confirm that the proponent complies with the mitigation measures as defined by the ESMP. Monitoring, environmental audits and process evaluation allow for unpredicted impacts and failed mitigation measures to be dealt with as soon as possible (SCBD 2006).

Further details and guidelines on the above steps are provided in the sections that follow.

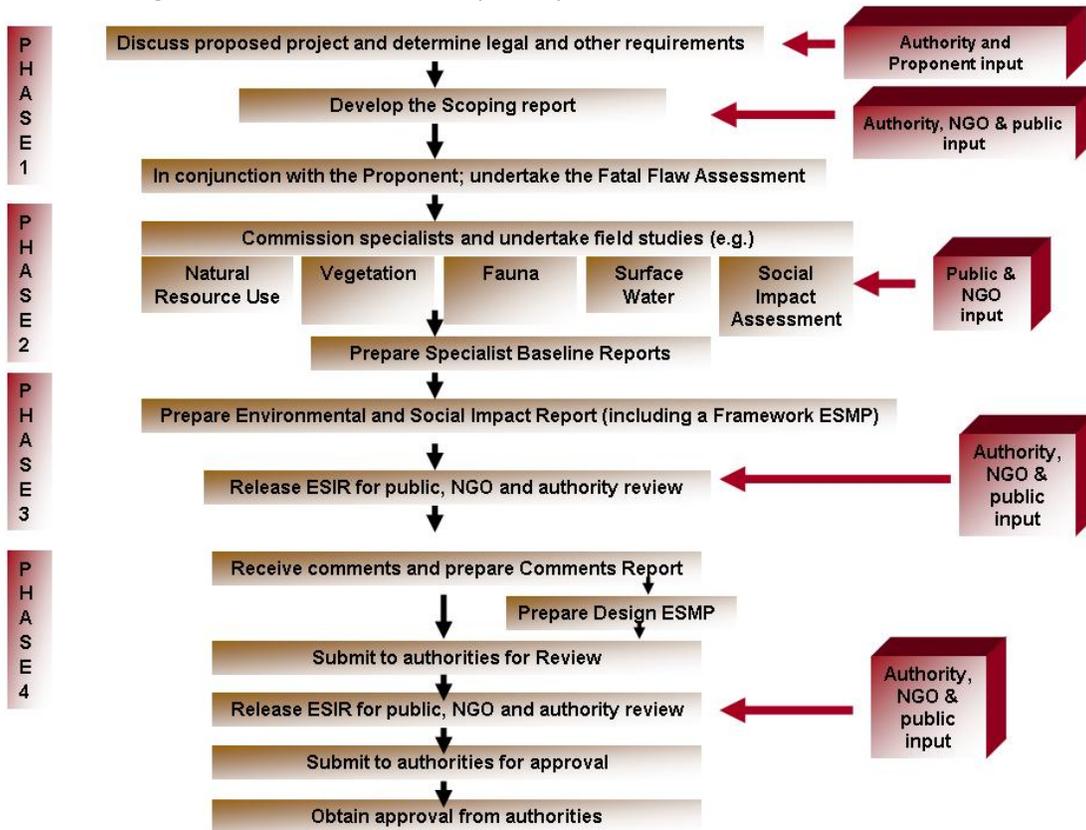


Figure 1: ESIA Process

4 STAKEHOLDER ENGAGEMENT DURING THE ESIA PROCESS

Effective and meaningful Stakeholder Engagement (SE) is one of the key principles of sustainable development for the RSB. It is a key criterion for the certification of biofuel projects. While stakeholder engagement may not be relevant to a biofuel operation that simply involves a switch from one commercial crop to another, stakeholder engagement will be necessary for any biofuel operation requiring an ESIA or RESA or specialist impact studies. The process of stakeholder engagement is well illustrated in section 2 of the RSB impact assessment guidelines (RSB-GUI-01-002-01)

Benefits of Stakeholder Engagement include:

- Letting interested and affected parties participate in decision-making to give them more control and security.
- Sharing information and facilitating understanding.
- Building legitimacy and support for decisions.
- Fostering constructive working relationships among stakeholders.
- Building consensus and generating support for the project.
- Reducing conflict.
- Tapping into the local, specialist knowledge of stakeholders to inform assessment and design.
- Improving the end decision and aiding sustainability.

Ideally Stakeholder Engagement should involve the public in problem-solving. As suggested in the second RSB Principle, the joint effort by stakeholders, specialists, authorities and the proponent ensures better results.

The following six aspects of stakeholder consultation must be followed to ensure compliance with RSB guidelines and principles:

- 1) Planning
- 2) Identifying and analysing Stakeholders
- 3) Consulting with Stakeholders
- 4) Recording and tracking interactions and feedback
- 5) Responding to submissions by IAPs, and
- 6) Reporting back

Stakeholder engagement usually begins before the ESIA process and extends well beyond it. It often begins when suitable land is sought. Once the ESIA has been completed, stakeholder engagement focuses on the implementation of the project. This would include the monitoring, employment and recruiting, resettlement, the development of accommodation for workers, social development projects, contracts with out-growers, etc. It is recommended that the ongoing stakeholder processes continue throughout the life of the biofuel operations.

It is recommended that the Biofuel developers hire a qualified community liaison officer to take responsibility for managing the stakeholder engagement process on an ongoing basis. This person must understand biofuels, law and business. The incumbent must also understand the local social context, traditions and languages. The liaison officer must be skilled at facilitating participation and consensus building. It is recommended that such a person be appointed as early as possible in the ESIA. If problems arise, the liaison officer should be the first to know.

5 SCOPING PHASE

The Scoping Process is the first phase of the ESIA. The primary objective is to define the scope of the ESIA i.e. to provide the terms of reference for the ESIA to follow. One identifies issues from all stakeholders (interested parties, authorities, proponent, and environmental consultants). The scoping report is also important for the decision-making body and the RSB auditor as they will want to assess the

terms of reference. In addition, the scoping process initiates stakeholder engagement. The elements of the Scoping process are detailed below.

5.1 Stakeholder Engagement during the Scoping Phase

During Scoping, the initial round of consultations is used to inform stakeholders and elicit their concerns. It includes a site visit by the relevant practitioners as determined during the screening process (for instance an experienced environmental practitioner and social scientist), so the natural and social environment is interrogated for issues to be presented in the scoping report.

The information obtained from the site visit and social engagement is used to write a Draft Scoping Report. This forms the focus of the second round of consultations. A key outcome of the scoping phase is a list of issues with responses. This is often referred to as an issues and response trail.

Key to this process is the need to give stakeholders sufficient time to review the report and submit their comments. However, in illiterate communities, stakeholders usually rely on oral and visual presentations of the report, and their comments are collected at the stakeholder meetings.

Methodologies to deal with such communities, and safeguard the interests of marginal groups and women, are described in section 2, the stakeholder engagement process described in the RSB impact assessment guidelines (RSB-GUI-01-002-01)

After the public review period, the ESIA team collates all the issues raised by stakeholders and the responses to them. If necessary, they will also amend the Scoping Report to accommodate the issues raised by stakeholders. This final Scoping Report must provide the Terms of Reference for the more detailed specialist studies and assessments. The specialist studies take place in the second phase of the ESIA.

6 IDENTIFYING THE ALTERNATIVES THAT NEED TO BE INVESTIGATED

Given that a key objective of an ESIA is to avoid and minimize the negative impacts of a proposed project, one has to consider various alternatives. These alternatives could include locational and/or routing alternatives, layout alternatives, process and/or design alternatives, scheduling alternatives or input alternatives.

Scoping must therefore identify alternatives that should be assessed in the ESIA. Only practical alternatives should be retained at the scoping phase, as detailed investigations cost time and money. The ESIA must also assess the “no-go” alternative, as this provides the benchmark against which the impacts of the proposed project are assessed. A no-go scenario would arise if the project will run into non compliance with the RSB standard that cannot be mitigated or addressed appropriately within the thresholds and requirements of the RSB standard.

The limitation of alternatives is controversial. For example, stakeholders who object to the proposed development, may demand that a fundamentally different alternative be assessed. For example, they may demand that establishing a conservation area instead of a biofuels project be assessed. Such alternatives cannot be investigated in the ESIA as they cannot be developed by the proponent.

The scope for assessing alternatives is therefore limited to incremental alternatives (i.e. alternatives that can achieve the same objectives but in a slightly different way). Fundamental alternatives are usually assessed in Strategic Environmental Assessments undertaken by governments as part of a strategic planning process. The RSB does not require the proponent to deliver on such fundamental alternatives.

If sustained opposition to the project is maintained by a significant majority of directly impacted stakeholders, despite negotiations and consensus seeking, and if agreed alternatives cannot mitigate social impacts to local communities or environmental impacts, then the RSB will not (likely) be able to certify the scheme unless it can be demonstrated that all the legal issues have been addressed, that the issue of disagreement is not around one of the RSB principles and/or the stakeholders who do not agree are not a significant majority of directly affected stakeholders.

In an ESIA the assessment of alternatives can be very complicated. This is particularly so if the proponent has not yet developed detailed project designs. This often results in changes being made to the project proposal while the ESIA is under way. These changes need to be factored into the assessment of the impacts. This often results in delays and escalating costs for the ESIA. However, the ESIA process must be sufficiently flexible to accommodate these changes.

In ESIA practice, it is usually assumed that the proponent has a clear project description. However, proponents sometimes do not have enough information or resources to be able to develop detailed designs. They need the research and consultation processes associated with the ESIA to help with the project design. In the case of large commercial biofuel projects proposed in less developed countries, the ESIA is often used to identify suitable areas for the development of the plantation and other facilities.

Sometimes it is not possible to finalise alternatives during the Scoping Process as more detailed studies are required. In such a case it may be necessary to develop a more phased approach to the ESIA. For example, after Scoping, some key specialist studies can determine suitable land for farming.

Two key constraints to large biofuels project are social impacts on directly affected people, and ecological impacts on areas with conservation values of a global, regional or local importance or carbon stock. Studies to investigate these could precede the full baseline studies. The ESIA can contribute proactively to a development by ensuring that significant issues can be avoided or “designed out”.

7 IDENTIFYING THE ISSUES THAT NEED TO BE INVESTIGATED AND CONSIDERED

One of the central objectives of the Scoping Process is to identify the concerns that need to be investigated in the ESIA. The most effective method is to consult key stakeholders. Their local knowledge and concerns are valuable tools that help them identify the potential impacts. However, they can only do this effectively if they get adequate information about the project.

In rural parts of less developed countries, illiterate and traditional people can find it very difficult to understand the scale and nature of proposed biofuel developments. They will also only speak up if they are able to articulate their views and feel free to express them. This is why it is so important to ensure that the stakeholders are adequately informed and have effective opportunities to participate in their own language.

Given these limitations of stakeholder engagement, it is the responsibility of the ESIA practitioners to use their resources, expertise, experience and judgment to identify the potential impacts, and articulate them on behalf of the stakeholders. The successful identification of impacts depends on a detailed understanding of the proposed project and the environmental and social context. Guidance on how to do this can be found in section 2 of the RSB impact assessment guidelines, which details participatory methodologies.

It is also the responsibility of the ESIA practitioners to raise issues and concerns regarding the proposed development which may not have been raised by any Interested and Affected Parties (IAPs). It is far better to deal with potentially significant issues sooner rather than later.

8 DEVELOPING A PLAN OF STUDY FOR THE ESIA

This is also referred to as the Terms of Reference for the ESIA. Usually this Plan of Study needs to be approved by the relevant authorities as they may wish to amend it. This can be used to help streamline the process with the regulatory requirements.

The Plan of Study for the ESIA should do the following:

- Define what alternatives should be assessed in the ESIA
- Define what issues need to be investigated
- Define what specialist studies need to be undertaken
- Provide the terms of reference for each specialist study
- Provide a methodology for rating the significance of the impacts
- Specify the structure and content of the Specialist reports.

9 CONTENT OF A SCOPING REPORT

The information gathered through the scoping meetings, from the site visit and from the client must be integrated into a draft Scoping report. In addition to identifying issues, this report should provide:

- A preliminary assessment of the impacts of these issues based upon initial baseline information.
- An overview of the project in relation to various Performance Standards and guidelines.
- Terms of Reference (ToR) for the ESIA phase, identifying the issues that need to be addressed in the ESIR.

A typical Scoping Report will have the following contents:

| # | Section Title | Contents |
|----------|----------------------------|--|
| 1 | Summary | This should provide a summary of the scoping study |
| 2 | Introduction | The introduction should provide brief background information, the terms of reference for the scoping study, and the study team. |
| 3 | The ESIA process | This section should explain the ESIA process as well as the Scoping process. The process should also be described in the context of the legislation and best practice of the country in which the development is proposed. It should also describe the public participation process for the Scoping phase. |
| 4 | Description of the Project | This section should provide a description of the proposed project, |

| | | |
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| | | in context. |
| 5 | Description of the environment | This section should provide a brief description of the environment. |
| 6 | Issues to be investigated | This section should provide a preliminary identification of the issues and impacts of the proposed development. These are gleaned from consultation with the public and authorities. |
| 7 | The baseline studies | From the issues identified in the previous section, baseline studies that are outstanding can be outlined, and the terms of reference for the specialist studies developed from them. |
| 8 | The environmental & social impact report | This section outlines the ESIA report that will be produced at the end of the ESIA phase. |
| 9 | References | A list of all the references and sources |
| 10 | Appendices | This should include key sources of data/results that informed the study, data collection forms/questionnaires used, pictures and other lists or long tables that could not be included in the text of the report. |

10 FULL ESIA PHASE

Once the Scoping Process is completed and the Terms for Reference for the ESIA are approved, the more detailed impact assessment studies can be undertaken. The various aspects of the ESIA are described below.

10.1 The role of Specialist Studies in the ESIA Process

Background

The involvement of specialists and the role of specialist studies in ESIA are required in order to:

- Add value to project planning and design;
- Adequately evaluate reasonable alternatives;
- Accurately predict and assess potential project benefits and negative impacts;
- Provide practical recommendations for avoiding or adequately managing negative impacts, or enhancing benefits;
- Provide reliable baseline data and recommendations for monitoring project impacts in the future.
- Supply enough information at appropriate stages of the ESIA process to address key issues, and effectively inform decision-making.

All specialist studies must be done by specialists and cannot be done by the operator or its staff. Broadly speaking, specialist involvement is needed when the natural and social environment could be significantly affected by the proposed activity or where there is insufficient information to determine whether unavoidable impacts would be significant. Independent facilitators are also required for the stakeholder engagement process.

Typically, issues that cannot be resolved with available information become the focus of detailed specialist assessments. Specialist studies may also be triggered by issues of serious concern raised

during the scoping phase of the ESIA. Also, early involvement of specialists in ESIA processes should encourage proactive consideration of potentially significant impacts.

Normally ESIA focus on assessing the impacts of a clearly defined development project. This is particularly important in less developed countries when the estate impacts conservation or livelihood supporting areas. Specialist studies may need to be done in a phased manner. This may involve undertaking the baseline studies first and using this information to help define the project proposal. Thereafter the impact assessment would be undertaken.

10.2 Guiding Principles

Generic principles for the involvement of specialists in ESIA processes:

1. Eliminate unnecessary specialist involvement through proactive project planning. Design to avoid or sufficiently reduce negative impacts that may otherwise require specialist assessment. Maximise use of existing relevant information prior to involving a specialist. This can be done during the screening phase
2. Where appropriate, involve specialists early in the ESIA process to increase effectiveness of their involvement. If you suspect that you will have significant impacts, involve specialists even during the screening process
3. Maintain continuity of specialist involvement throughout the process to add value to project planning and design.
4. The correct level of specialist information should be supplied at the right time in the ESIA process.
5. Allow specialists to identify key issues, over and above stakeholder-identified issues.
6. Allow for effective interaction between specialists and the ESIA practitioner, the project proponent, the authorities, other specialists on the ESIA team and other interested and affected parties (IAPs). This improves the quality of the ESIA outcomes and ensures that findings are informed by local and indigenous knowledge.

Specialist involvement can vary in intensity (i.e. level of detail) and may include any or all of the following approaches:

- Provision of a specialist opinion or comment;
- Archival research and literature review;
- Detailed baseline survey (including site visit/s);
- Mapping of stakeholders, consultation and interviews;
- Mapping and simulation modelling;
- Assessment of impacts and their significance.

Terms of reference for specialist involvement should be appropriate to the purpose and intensity/scale of involvement.

10.3 Role of the specialist

A specialist's role in the ESIA process could be to assist with any or all of the following:

Describing the relevant component of the affected environment (i.e. social, soils, water, ecology, etc)

Where there is insufficient information, and potential for significant impacts, the specialist may be required to provide (or supplement) information describing aspects of the biophysical, social or economic environment. This helps identify key issues, reasonable alternatives, practical management or monitoring programmes.

Describing the legal, policy and planning context

The specialist may summarise international, national, local and corporate legislation, policies and plans. This indicates constraints to the development (including potential “fatal flaws”). It may justify early changes to the project description (e.g. if legislated thresholds/standards are exceeded).

Identifying and responding to issues

Specialist expertise should ensure that the full ranges of key issues are identified as early as possible. Specialists may also recommend further specialist involvement.

Identifying alternatives

Specialist involvement may be required to proactively identify, advise and/or investigate reasonable alternatives to the original project description (e.g. design, layout, location and land use, technology, business model, approach, route alternatives) that avoid or reduce negative impacts and enhance project benefits.

Developing specialist terms of reference

A specialist may be required to assist the ESIA practitioner in drafting appropriate terms of reference for the proposed specialist input.

Predicting and assessing impacts

Where insufficient information is available to address key issues raised during scoping, a specialist may be required to assess the potential positive and negative impacts of the proposed development.

Recommending management actions and monitoring programmes

The specialist may be required to provide practical recommendations for management actions and monitoring programmes. In recommending management actions consideration should be given to a hierarchy of possible measures. Measures for avoiding negative impacts are preferable, followed by measures for mitigating, restoring, rehabilitating or compensating for negative impacts. Recommendations should consider enhancing project benefits too.

Determining the need for specialist involvement

The ESIA practitioner needs to first identify issues and, secondly, evaluate which of these issues need to be addressed by specialists. These two stages are necessary regardless of whether the impacts are identified and evaluated during pre-application planning, screening, scoping or the impact assessment phase.

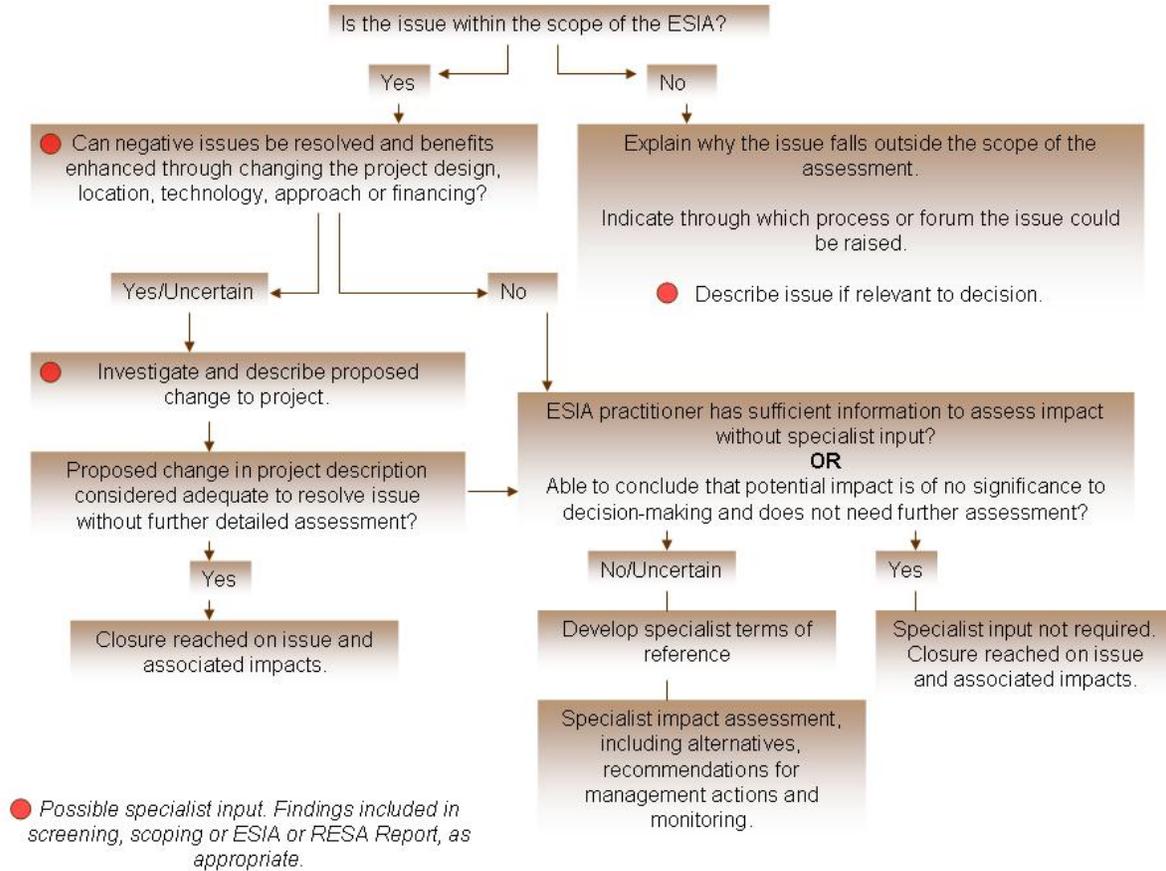


Figure 2: Approach to determining the need for, timing and role of specialists in the ESIA process (from Munster 2005)

11 SPECIALIST STUDIES

11.1 Typical Specialist Studies required for Biofuels projects

This section provides a list of specialist studies that would typically be required, together with a brief outline of their scope. Additional studies that might be required are also listed. The following specialist studies are usually required:

| # | Specialist Study | Impacts that trigger the need for a specialist study |
|---|--|---|
| 1 | Biodiversity and Ecological Assessment | Change in land use of more than 1000ha of land not used continuously for agriculture in the past five years. Impacts on protected areas and their buffer zones, wetlands, mangroves, estuaries and areas with conservation values of a global, regional or local importance, forested areas. Impacts on ecosystems, ecological processes or biodiversity. |
| 2 | Hydrology and Surface Water Assessment | Where the extraction of water and generation of waste by the biofuel project might impact on the quantity and quality of surface or ground |

| | | |
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| | | water |
| | | Transfers for water from one (sub-) catchment to another where sensitive aquatic ecosystems exist. |
| | | Pollution of water bodies |
| 3 | Socio-economic base line and Impact Assessment (SIA) | When biofuel operations are initiated in areas where there is: <ul style="list-style-type: none"> • poverty and/or food insecurity • a potential need for resettlement, and where • traditional land and resource use rights might be affected • if there are any other potential significant social impacts |
| 4 | Waste Management Study | In cases where the biofuel operation will generate soil or liquid waste products that could pollute the environment, especially serious contamination of soil and groundwater. |
| 5 | Infrastructure & Transport Assessment | In cases where the biofuel operation will involve the transport of large volumes of feedstock or biofuel on existing roads, particularly in areas of poverty. In cases where a large scale biofuel operation will involve considerable changes to the local infrastructure i.e. roads, water supply, settlements, electricity, clinics, schools, etc. |

The following studies might be required, but this is dependant on the project, the nature of the affected area and the anticipated market for the product:

1. Sustainability Appraisal of the project
2. Land Use Analysis
3. Resettlement Policy Framework
4. Visual Impacts Assessment
5. Air Quality Impact Assessment

11.2 Structure and Content of the Specialist Volume

The Specialist Volume must contain a chapter for each specialist study. It should also have an introduction, a description of the proposed project, and an explanation of the impact rating methodology used.

Each specialist study should follow the same format. A suggested structure for these chapters follows:

| # | Section Title | Contents |
|---|---------------|---|
| 1 | Summary | This should provide a summary of the specialist study including the impacts, conclusions and recommendations. |
| 2 | Introduction | The introduction should provide brief background information, the terms of reference for the study, and the study team. |
| 3 | Methodology | This section should indicate what data sources and research methods were used as well as the methods of data analysis. |

| | | |
|---|---|---|
| 4 | Description of the Environment | This section should provide an in-depth description of the aspect of the environment relevant to the specialist study. |
| 5 | Impact Assessment and Mitigation Measures | This section should form the bulk of the report. It should identify and discuss each of the individual impacts and use the impact ratings method to rate their significance before and after mitigation, as well as during the construction, operational and decommissioning phases of the project. For each impact, the recommended mitigation measures needed in order to reduce the negative impacts and enhance the positive impacts associated with the proposed development should be discussed. Attention should be drawn to any very high and irreversible impacts that cannot be mitigated as these may be fatal flaws. A detailed justification for such a significance rating is required. |
| 6 | Conclusion | This should provide a summary of the context and impacts. |
| 7 | Recommendation | The recommendations should focus on the suggested mitigation measures. |
| 8 | References | A list of all the references and sources |
| 9 | Appendices | This should include key sources of data/results that informed the study, data collection forms/questionnaires used, pictures and other lists or long tables that could not be included in the text of the report. |

12 METHODOLOGY FOR RATING THE SIGNIFICANCE OF IMPACTS

The impact rating method must consider the spatial extent, time-scale, likelihood, severity of the impacts and confidence levels. The method needs to rate impacts as very high, high, moderate or low, and positive or negative. This method will be used by all the specialists and ESIA practitioners involved in the ESIA to assess the significance of the full range of impacts from social to ecological to physical, during the construction, operational and decommissioning phases of the proposed biofuel project. It would also be used to assess the recommended mitigation measures. Any impacts that have a 'Very High' negative significance rating and cannot be mitigated to lower significance levels might be considered fatal flaws. This could result in the project not being approved or certified. Annex 1 provides the operator with a tool to assess the significance of impacts.

13 INTEGRATED ASSESSMENT OF ALL IMPACTS

To ensure a holistic perspective of overall project impact, it is necessary to integrate all the specialist studies into one assessment. An important task is to compare the findings of the various specialists' studies for inconsistencies, overlaps, gaps and standardisation. Problems with one or more reports may emerge. One must also examine impacts for knock-on (secondary) effects on other elements of the natural and social environment.

For example the loss of natural vegetation due to the development of a biofuel estate may result in a loss of access to natural resources for neighbouring residents, and/or to increasing pressure on natural resources around the estate and consequent degradation. Secondary impacts are sometimes called

‘cumulative impacts’. Secondary impacts must be factored into the relevant specialist studies. Integrated assessment is best achieved by a meeting between specialists to present draft report findings and discuss the links and conflicts between them.

Once these issues are resolved, a summary report should be written called the Environmental and Social Impact Report (ESIR). This summary should discuss the kinds of impacts, as well as their significance and distribution. This summary addresses the following:

- Are any issues that cannot be resolved and thus will result in non compliance with the RSB standard (typically called fatal flaws in traditional ESIA processes) associated with the project or parts of it?
- How many or what proportion of all the impacts are Very significant, significant, moderately significant or not significant?
- Are the very high impacts associated with something that could be modified or with an aspect that cannot be modified?
- Are the high and very high impacts those that affect one particular aspect of the natural or social environment or many aspects, and which are these?

The ESIA report should also provide some insights into the distribution of impacts (who benefits and who would lose).

14 ASSESSING CUMULATIVE IMPACTS

Cumulative Impacts or effects have been defined as “...changes to the environment that are caused by an action in combination with other past, present and future human actions” (Hegmann *et al.* 1999).

The assessment of cumulative impacts is seen as necessary because while the impact of one project (or one aspect of the project) might be acceptable, but when combined with the impact of other developments in the area (past, present or future) or other aspects of the project, may be significant. For example the development of an estate may result in densification of settlement and resource use around the estate and therefore expand the impact zone. The involvement of outgrowers will impact on additional areas. This could affect food security, water use, soils, vegetation etc. The assessment of cumulative impacts ensures that overall context is considered. The assessment is more thorough. As illustrated below, a number of different types of cumulative effects are generally recognised.

Table 1: Types of cumulative effects (from DEAT 2004, pg 6)

| Type | Characteristic | Example |
|------------------------------|---|---|
| Time crowding | Frequent and repetitive impacts | Discharge too frequent for the natural sink to deal with |
| Time lags | Delayed effects | Bioaccumulation of chemicals and toxins used in agriculture or processing |
| Space crowding | High spatial density of effects | Pollution discharge into stream from non-point sources. |
| Cross-boundary Fragmentation | Effects occur away from the source Change in landscape pattern | Atmospheric pollution Fragmentation of settlements and indigenous habitats |

| | | |
|-------------------------|---|---|
| Compounding effects | Effects arising from multiple sources or pathways | Synergism amongst pesticides |
| Indirect effects | Secondary effects | Displacement effects of the impact to elsewhere and increased rates of degradation as well as livelihood impacts. |
| Triggers and thresholds | Fundamental changes in system functioning and structure | Water extraction impacting on the functioning of the river systems |

Again, the best way to ensure that cumulative impacts are adequately assessed is to bring the specialists together to present their findings and discuss the links and conflicts between them. The assessment of cumulative impacts is complex and challenging. The reader is referred to DEAT (2004)³ and Canter & Sadler (1997)⁴

15 STRUCTURE AND CONTENT OF THE ENVIRONMENTAL IMPACT REPORT (EIR)

The EIR is a non-technical summary of the impacts identified by the specialist studies. It also contains background information for the proposed development. It should be structured as indicated in the table below. The ESIA should make some conclusions about the relative impact and acceptability of the proposed project. It should also make recommendations; firstly, on whether the project should be approved (or certified), and secondly, how the project could be modified to minimize impacts. These later recommendations highlight important mitigation measures proposed by the specialists and environmental practitioners (in the specialist reports).

The suggested structure and contents of a draft Environmental & Social Impact Report (Vol. 3) – prior to the review by stakeholders – is presented below

Table 2: Suggested structure and content of draft ESIA report

| # | Section Title | Contents of Draft Report |
|---|---------------|--|
| 1 | Summary | This serves as a summary of the ESIR and includes the final conclusions of the ESIA as well as a summary of the background information. This may be the only part of the ESIA that many people read, and it is extremely important that it be clear and concise. |
| 2 | Introduction | The introduction of the report should present background information. This section should provide a brief overview of the proposed development, introducing the proponent, the location of the project and other important parameters. This section should also include the importance of the biofuels development for the host country. The introduction should describe the scope of the ESIA, as well as a brief outline of the contents of the report. |

³ DEAT (2004) Cumulative Effects Assessment, Integrated Environmental Management, Information Series 7, Department of Environmental Affairs and Tourism (DEAT), Pretoria.

⁴ Canter, L.W. and Sadler, B. (1997) A Toolkit for Effective ESIA Practice - Review of Methods and Perspectives on their Application. A Supplementary Report of the International Study of Effectiveness of Environmental Assessment. International Association of Impact Assessment.

| | | |
|----|-------------------------------------|--|
| 3 | Description of the Proposed Project | This section should describe all aspects of the proposed development, including its activities, location, size, layout, and type of project, the description should include associated infrastructure. Diagrams and site plans should be included as well as a justification for why the project is needed. |
| 4 | Issues Raised by IAPs | <p>In the Draft Report this section should provide a brief list and/or summary discussion of the main issues of concern raised by IAPs during the Scoping Process. It should also explain what opportunities the Stakeholders/IAPs will have to participate in the Public Review Period and submit their comments (i.e. describe the public review process). It should also describe how this process will comply with regulatory requirements.</p> <p>In the Final ESIR this section should describe the stakeholder engagement activities (milestones) that took place during the public review period and describe how this complied with the relevant national and RSB regulatory requirements. It should also provide a summary discussion of the issues raised by the various stakeholders and how these have been addressed. Care should be taken to indicate the views and issues raised by the different types of stakeholders.</p> |
| 6 | Description of the Environment | It should include a summary of the descriptions of the environment from the specialist studies including a description of the biophysical environment and socio-economic environment. |
| 7 | Impact Assessment | <p>This section should provide an impact summary (usually in the form of a table) for each of the specialist studies as well as their recommended mitigation measures. It should also provide a summary table of all the impacts and include a comparative discussion of them. Cumulative impacts should also be discussed in this section.</p> <p>Attention should be drawn to any very high and irreversible impacts that cannot be mitigated as these may be fatal flaws. Provide detailed justification for fatal flaws.</p> |
| 8 | Conclusion | This section should come to some conclusion based on the overall impacts and mitigation measures described by each of the specialist studies as well as the cumulative impacts described in section 5. The conclusions and recommendations should remain impartial and based on an objective as possible assessment of the available impacts and mitigation measures. |
| 9 | Recommendation | The recommendations should focus on mitigation measures. |
| 10 | References | A list of all the references and sources |
| 11 | Appendices | <p>This should include:</p> <ul style="list-style-type: none">• The Issues Response Trail• Copies of all correspondence received from the public, specialists and the |

proponents (all stakeholders)

- Minutes of any stakeholder meetings held
- Copies of ESIA advertisements in the media
- Detailed designs for the project (if these exist and cannot be included in the body of the report)

16 MITIGATION MEASURES AND ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

In order to comply with RSB Principle 2, it is essential that the ESIA produces an Environmental and Social Management Plan (ESMP). This plan needs to ensure compliance with all the RSB principles. It will be based firstly on the mitigation measures recommended in the various specialist studies, but in addition there are management actions that apply to all biofuels projects (according to RSB principles). Examples are Principles 4 (Human rights) and 11 (Technology). It also needs to provide guidelines on how the impact of the project will be monitored over time, and how the ESMP can be revised if there are changes to the project.

ANNEXE 1

Example of an ESIA Impact Rating Methodology

Five factors need to be considered when assessing the significance of impacts, namely:

- Relationship of the impact to **temporal** scales - the temporal scale defines the significance of the impact at various time scales, as an indication of the duration of the impact.
- Relationship of the impact to **spatial** scales - the spatial scale defines the physical extent of the impact.
- The severity of the impact- the **severity/beneficial** scale is used in order to scientifically evaluate how severe negative impacts would be, or how beneficial positive impacts would be on a particular affected system (for ecological impacts) or a particular affected party.
- The severity of impacts can be evaluated with and without mitigation in order to demonstrate how serious the impact is when nothing is done about it. The word 'mitigation' means not just 'compensation', but also the ideas of containment and remedy. For beneficial impacts, optimization means anything that can enhance the benefits. However, mitigation or optimization must be practical, technically feasible and economically viable.
- The **likelihood** of the impact occurring - the likelihood of impacts taking place as a result of project actions differs between potential impacts. There is no doubt that some impacts would occur (e.g. loss of vegetation), but other impacts are not as likely to occur (e.g. vehicle accident), and may or may not result from the proposed development. Although some impacts may have a severe effect, the likelihood of them occurring may affect their overall significance.

Each criterion is ranked with scores assigned as presented in Table 1 to determine the overall **significance** of an activity. The criterion is then considered in two categories, viz. effect of the activity and the likelihood of the impact. The total scores recorded for the effect and likelihood are then read off the matrix presented in Table 2-2, to determine the overall significance of the impact. The overall significance is either negative or positive.

Table 1: Ranking of Evaluation Criteria

| | | Score |
|---------------|-----------------------|--------------|
| EFFECT | Temporal Scale | |
| | Short term | 1 |
| | Medium term | 2 |
| | Long term | 3 |
| | Permanent | 4 |
| | Spatial Scale | |
| | Localized | 1 |
| | Study Area | 2 |
| | Regional | 3 |
| | National | 3 |

| | | | | |
|-------------------|--|--|---|---|
| LIKELIHOOD | Severity | Severity | Benefit | |
| | International | Internationally | | 4 |
| | Slight | Slight impacts of the affected system(s) or party(ies) | Slightly beneficial to the affected system(s) and party(ies) | 1 |
| | Moderate | Moderate impacts of the affected system(s) or party(ies) | Moderately beneficial to the affected system(s) and party(ies) | 2 |
| | Severe/ Beneficial | Severe impacts of the affected system(s) or party(ies) | A substantial benefit to the affected system(s) and party(ies) | 4 |
| | Very Severe/ Beneficial | Very severe change to the affected system(s) or party(ies) | A very substantial benefit to the affected system(s) and party(ies) | 8 |
| | Likelihood | | | |
| | Unlikely | The likelihood of these impacts occurring is slight | | 1 |
| | May Occur | The likelihood of these impacts occurring is possible | | 2 |
| | Probable | The likelihood of these impacts occurring is probable | | 3 |
| Definite | The likelihood is that this impact will definitely occur | | 4 | |

* In certain cases it may not be possible to determine the severity of an impact thus it may be determined: Don't know/Can't know

Table 2: Matrix used to determine the overall significance of the impact based on the likelihood and effect of the impact.

| Likelihood | Effect | | | | | | | | | | | | | | | |
|------------|--------|---|---|----|----|----|----|----|----|----|----|----|----|----|----|--|
| | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | |
| 1 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | | |
| 2 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | | |
| 3 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | | |
| 4 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | | |

Table 3: Description of Environmental Significance Ratings and associated range of scores

| Significance Rate | Description | Score |
|-------------------|---|-------|
| Low | An acceptable impact for which mitigation is desirable but not essential. The impact by itself is insufficient even in combination with other low impacts to prevent the development being approved. These impacts will result in either positive or negative medium to short | 4-8 |

| | | |
|-----------|---|-------|
| | term effects on the social and/or natural environment. | |
| Moderate | An important impact which requires mitigation. The impact is insufficient by itself to prevent the implementation of the project but which in conjunction with other impacts may prevent its implementation. These impacts will usually result in either a positive or negative medium to long-term effect on the social and/or natural environment. | 9-12 |
| High | A serious impact, if not mitigated, may prevent the implementation of the project (if it is a negative impact). These impacts would be considered by society as constituting a major and usually a long-term change to the (natural &/or social) environment and result in severe effects or beneficial effects. | 13-16 |
| Very High | A very serious impact which, if negative, may be sufficient by itself to prevent implementation of the project. The impact may result in permanent change. Very often these impacts are unmitigable and usually result in very severe effects, or very beneficial effects. | 17-20 |

The **significance** scale is an attempt to evaluate the importance of a particular impact. This evaluation needs to be undertaken in the relevant context, as an impact can either be ecological or social, or both. The evaluation of the significance of an impact relies heavily on the values of the person making the judgment. For this reason, impacts of especially a social nature need to reflect the values of the affected society.

Prioritizing

The evaluation of the impacts, as described above is used to priorities which impacts require mitigation measures.

Negative impacts that are ranked as being of “**VERY HIGH**” and “**HIGH**” significance will be investigated further to determine how the impact can be minimized or what alternative activities or mitigation measures can be implemented. These impacts may also assist decision makers i.e. lots of **HIGH** negative impacts may bring about a negative decision.

For impacts identified as having a negative impact of “**MODERATE**” significance, it is standard practice to investigate alternate activities and/or mitigation measures. The most effective and practical mitigations measures will then be proposed.

For impacts ranked as “**LOW**” significance, no investigations or alternatives will be considered. Possible management measures will be investigated to ensure that the impacts remain of low significance.

Example of the Use of the Rating Scale

Impact 1: Contamination of surface and groundwater

Cause and Comment

It is estimated that as many as 350 construction workers will be employed on site. These workers will generate sanitary waste which needs to be carefully managed and properly disposed of.

Significance of Impact

| Impact | Effect | | | | | Risk or Likelihood | Total Score | Overall Significance | | |
|--------------------|----------------|---|---------------|---|--------------------|--------------------|-------------|----------------------|---|----------------|
| | Temporal Scale | | Spatial Scale | | Severity of Impact | | | | | |
| Without Mitigation | Short term | 1 | Study Area | 2 | Moderate | 2 | Definite | 4 | 9 | MODERATE |
| With Mitigation | Short term | 1 | Localized | 1 | Slight | 1 | Unlikely | 1 | 4 | LOW BENEFICIAL |

Mitigation and Management

Chemical toilets could be used on the construction site and these would need to be emptied periodically and the waste disposed of at a municipal sewage treatment facility. If one conservatively assumes a volume of 50L of wash water and sewage per individual during a work shift then the total volume of effluent requiring disposal could be $\sim 17\text{m}^3$ per day.