

Environmental RTDI Programme 2000–2006

**Development of Strategic
Environmental Assessment (SEA) Methodologies
for Plans and Programmes in Ireland
(2001-DS-EEP-2/5)**

Synthesis Report

Prepared for the Environmental Protection Agency

by

ERM Environmental Resources Management Ireland Limited

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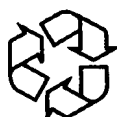
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1 Introduction

1.1 Purpose of the Synthesis Report

This Report has been prepared by ERM Environmental Resources Management Ireland Ltd and provides the findings of the research project entitled “*Development of Strategic Environmental Assessment (SEA) methodologies for plans and programmes in Ireland*”, funded under the Environmental Protection Agency (EPA) Environmental Research, Technological Development and Innovation Programme (Phase 2), 2000–2006 (Ref 2001-EEP/DS-2/5).

On 5th June 2001, the European Council adopted Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment (“the SEA Directive”) (EU, 2001). The successful implementation of the SEA Directive, which takes effect from July 2004, will rely upon “practitioners” of SEA being able to apply best-practice techniques within an overall SEA methodology that both allows compliance with the SEA Directive’s requirements and fulfils its overall purpose of contributing to sustainable development. This research project aimed to develop such an SEA methodology that will meet both of these goals.

The research undertaken in the development of the SEA methodology presented in this Synthesis Report, draws on international experience and good practice and has used Irish case studies to demonstrate application and implementation issues associated with SEA methodology.

The intended audience for this Synthesis Report reflects the application of SEA to a broad range of sectors. The report will prove useful to all those who will be responsible for undertaking SEA in Ireland (particularly persons within local authorities and state agencies and private environmental consultants, hereafter referred to as SEA practitioners) as well as those who will ensure that the SEA Directive is enforced in a timely and effective manner.

Whilst this Synthesis Report includes the key outcomes of the research, a fuller Final Report has also been prepared. SEA practitioners are strongly advised to consult the Final Report prior to commencing an SEA.

The Final Report is available for downloading from the EPA website <http://www.epa.ie>.

1.2 Structure of the Synthesis Report

Section 1 presents the purpose of the study and the structure of the Synthesis Report.

[Section 2](#) provides a brief background to Strategic Environmental Assessment, using the SEA Directive as the basis for the discussion of SEA principles. It includes a brief discussion of the procedural and documentation requirements. The implications of the forthcoming transposition of the directive for those who will have to undertake and analyse SEA are discussed in this section. A summary is also provided on what works and what does not work in SEA, based upon the review of international literature on SEA experiences in a range of countries.

[Section 3](#) presents the SEA process as a series of procedural “stages” within which tried-and-tested “tasks” will deliver the required outputs at each stage.

[Sections 4 and 5](#) deal with two elements of SEA that will prove particularly challenging in Ireland: how to effectively include stakeholders at all stages of the SEA process and how to ensure that the SEA documentation is of “sufficient quality”. The use of an SEA Report Checklist is discussed.

[Section 6](#) sets out the overall conclusions of the research project and provides pro-active recommendations to stimulate the development and uptake of SEA in Ireland.

[Appendix A](#) lists several potential sources of environmental data that may be consulted during the SEA process.

[Appendix B](#) presents the SEA Checklist, which may be used by SEA practitioners to monitor progress during the SEA process or to review draft SEA Reports.

Readers should refer to Directive 2001/42/EC on the Assessment of the Effects of Certain Plans and Programmes on the Environment for the full text of the SEA Directive (EU, 2001).

2 Strategic Environmental Assessment Directive

2.1 Introduction

This section provides an introduction to strategic environmental assessment and the benefits that SEA brings to the control of project-level environmental impacts. It continues by outlining the procedural and the documentation requirements of the SEA Directive.

The proposed SEA methodology, which follows in [Section 3](#), must comply with these requirements and will also add elements of good practice as described in [Section 2.5](#) below.

2.2 Overall Principles

2.2.1 What is SEA?

“SEA is a systematic, on-going process for evaluating, at the earliest appropriate stage of publicly accountable decision-making, the environmental quality, and consequences, of alternative visions and development intentions incorporated in policy, planning or programme initiatives, ensuring full integration of relevant biophysical, economic, social and political considerations” (Partidário, 1998).

SEA shares much in common with project-level Environmental Impact Assessment (EIA) in that they both aim to minimise the significant environmental impact of a proposed action. EIA is applied to development projects (e.g. wind farms, waste-water treatment plants, housing developments) (under statutory instruments) and is hereafter referred to as project EIA in this report whilst SEA can apply at a higher, or earlier stage in planning such developments (e.g. waste management plans, county development plans).

Similarly, whereas the project EIA usually addresses specific, direct cause–effect relationships between the proposed development and an environmental receptor, an SEA is able to stand back and look at the broader picture. SEA is better able to address cumulative, indirect and multiplier effects; it can also look at alternative means of meeting the same need. Overall, SEA is able to be more flexible and pro-active in nature whereas project EIA is more constrained by the scope of the proposed

development that is under scrutiny and is less able to look “above the parapet”.

2.3 The SEA Directive (2001/42/EC)

On 5th June 2001, the European Parliament and Council adopted the SEA Directive. It ended over 20 years of political debate within the Commission. The eventual form of the Directive was the result of negotiations, which finally satisfied the individual Member States, the European Commission, the European Council and the European Parliament.

Although there are no SEA guidelines, national regulations or other similar instruments as yet, which purport to apply the Directive’s requirements at the national level, the language of the Directive provides a clear basis for the development of the methodology presented in this research report. The rationale for proceeding in advance of national transposition is that the SEA Directive will form the minimum set of requirements that SEA practitioners will have to adhere to.

2.4 Requirements of the Directive

[Table 1](#) overleaf summarises the requirements of the Articles of the SEA Directive.

2.4.1 Information Requirements

Article 5 of the Directive requires the environmental report (the “SEA Report”) to contain certain information specified in Annex I of the Directive. These information requirements are reproduced below:

- a. Outline of the contents, main objectives of the P/P and relationship with other relevant plans and programmes.
- b. Relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the P/P.
- c. Environmental characteristics of areas likely to be significantly affected.
- d. Existing environmental problems that are relevant to

Table 1. Summary of Requirements set by the SEA Directive (P/P = Plan or Programme).

Article No.	Procedure
1	Establishes the objective of the Directive , i.e. a high level of environmental protection and integration of environmental considerations into plans and programmes to promote sustainable development.
2	Provides definitions of “plans and programmes”, “environmental assessment”, “environmental report” and “the public”.
3	Scope of the Directive , i.e. which types of P/P come under the Directive. The Article lists 11 sectors, establishes linkage to the Habitats and EIA Directives, and the need to screen a P/P for significant environmental effects. It also notes the excluded types of P/P. Further details are provided in Section 2.4 .
4	General Obligations: SEA to be applied during preparation and prior to adoption of the P/P. The Directive may be integrated into existing procedures or may be incorporated into new procedures. SEA may occur at different stages in a hierarchy of P/Ps and this should be taken into account.
5	Environmental Report to be prepared containing the information in Annex I of the SEA Directive, as far as is reasonable. Designated environmental authorities must be consulted on the scope of the report.
6	Consultation with environmental authorities and the public is required to occur at the time when the draft P/P and the environmental report are published.
7	Transboundary consultations to occur where there may be significant effects on another Member State.
8	Decision-making to take account of responses to consultation, prior to adoption of the P/P.
9	Information to be provided on the decision to include the adopted P/P and a statement indicating how the environmental report and the consultation responses were taken into account.
10	Monitoring of significant effects to detect unforeseen effects must be undertaken.
11	Overlap with other EC legislation: The SEA may be undertaken to comply with similar requirements in other Directives, but will not prejudice the requirements of the EIA Directive.
12	Information, reporting and review: Experience must be shared between Member States; there must be some form of compliance check on environmental reports. A 5-year review will be undertaken. The Commission will also consider extending the Directive to P/Ps currently funded by the EU and excluded from the scope of the Directive under Article 3.
13	Implementation of the Directive: Sets a deadline of 20th July 2004 for transposing the Directive. A P/P may not require SEA after this date if the “first formal preparatory stages” have already commenced and the P/P is adopted within 2 years of the Directive’s deadline.
14	Entry into Force: The Directive entered into force when it was published in the Official Journal of the European Communities.
15	Addressees comprise the Member States.

the P/P including, in particular, those relating to any areas of a particular environmental importance, such as areas designated under the Birds and Habitats Directives.

e. Environmental protection objectives, established at international, European or national level, which are relevant to the P/P and the way those objectives and any environmental considerations have been taken into account during its preparation.

f. Likely significant effects on the environment,

including on issues such as biodiversity¹, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors.

g. Measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the

1. Guidelines for addressing biodiversity issues have been adopted under the Convention on Biological Diversity (<http://www.biodiv.org/>).

environment caused by implementing the P/P.

- h. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.
- i. A description of the measures envisaged concerning monitoring in accordance with Article 10.
- j. A non-technical summary of the information provided under the above headings.

The information described in Annex I of the SEA Directive should be collected and analysed as part of the preparation of the *draft* P/P and the “SEA Report” must be published at the same time as the draft P/P. The SEA Report may be within the draft P/P or may be a stand-alone document.

Once the P/P has been adopted, there is no obligation to produce an updated SEA Report, but a “statement” must be produced, demonstrating how the SEA Report and any responses from consultees were taken into account. So in summary, there are two key documentary outputs of the SEA process as required by the Directive: the “SEA Report” at the draft P/P stage and the “SEA Statement” at the final P/P stage.

2.5 SEA Status Around the World

At present, SEA is a “statutory”² requirement in several countries including Canada, Denmark, Finland, France,

Latvia, the Netherlands, New Zealand, Norway, the Slovak Republic, Spain, Sweden, and the United States (ICON, 2001). SEA is also a mandatory requirement for plans and programmes developed or funded by the Canadian International Development Agency (CIDA), the European Bank of Reconstruction and Development (EBRD) and the World Bank. In addition, certain countries are undertaking non-statutory SEA of plans and programmes, including Austria, the United Kingdom, Hong Kong, the Federal and State Governments of Australia and Poland, either under government administrative procedures or through advisory good-practice guidance. A larger number of countries are currently either piloting SEA applications or are in the early stages of undertaking their first SEA, including Ireland.

It should be noted that the status of SEA is constantly changing in countries around the world and that the literature review represents a snapshot of international good practice based upon the documents that were consulted early in the research project. The full account of the review of international practice is presented in the Final Report. The results were incorporated into the development of the methodology that is summarised in [Section 3](#).

2. “Statutory” is regarded as meaning that there are regulatory requirements upon authorities to undertake a form of SEA on plans and programmes.

3 Proposed Methodology to Undertake Strategic Environmental Assessment

3.1 Introduction

The objectives of the overall methodology are 3-fold:

1. to comply with the procedural requirements of the Directive as set out in Articles 2–12;
2. to provide the information required by Annex I of the Directive; and
3. to fulfil the overall purpose of the Directive by also incorporating good practice in SEA in the methodology.

The proposed methodology is composed of four procedural “Stages”. Each procedural stage involves several “Tasks” and for each task a specific approach or method is described to deliver the desired outcome. The stages and tasks are illustrated in the flow charts contained in this chapter.

The Stages are:

- **Stage 1** Screening of Plans and Programmes
- **Stage 2** Scoping the SEA
- **Stage 3** Identification, Prediction, Evaluation and Mitigation of Potential Impacts
- **Stage 4** Consultation, Revision and Post-Adoption Activities.

The proposed methodology is generic in nature and is designed to be flexible and applicable to all of the plans and programmes that may require SEA in Ireland. When applying the proposed methodology, it will be important to adapt the individual tasks to the nature of the P/P, and the level of detail of the P/P being assessed. This will increase the effectiveness of the application of the tasks and the quality of the outputs.

The proposed methodology is described on the following pages.

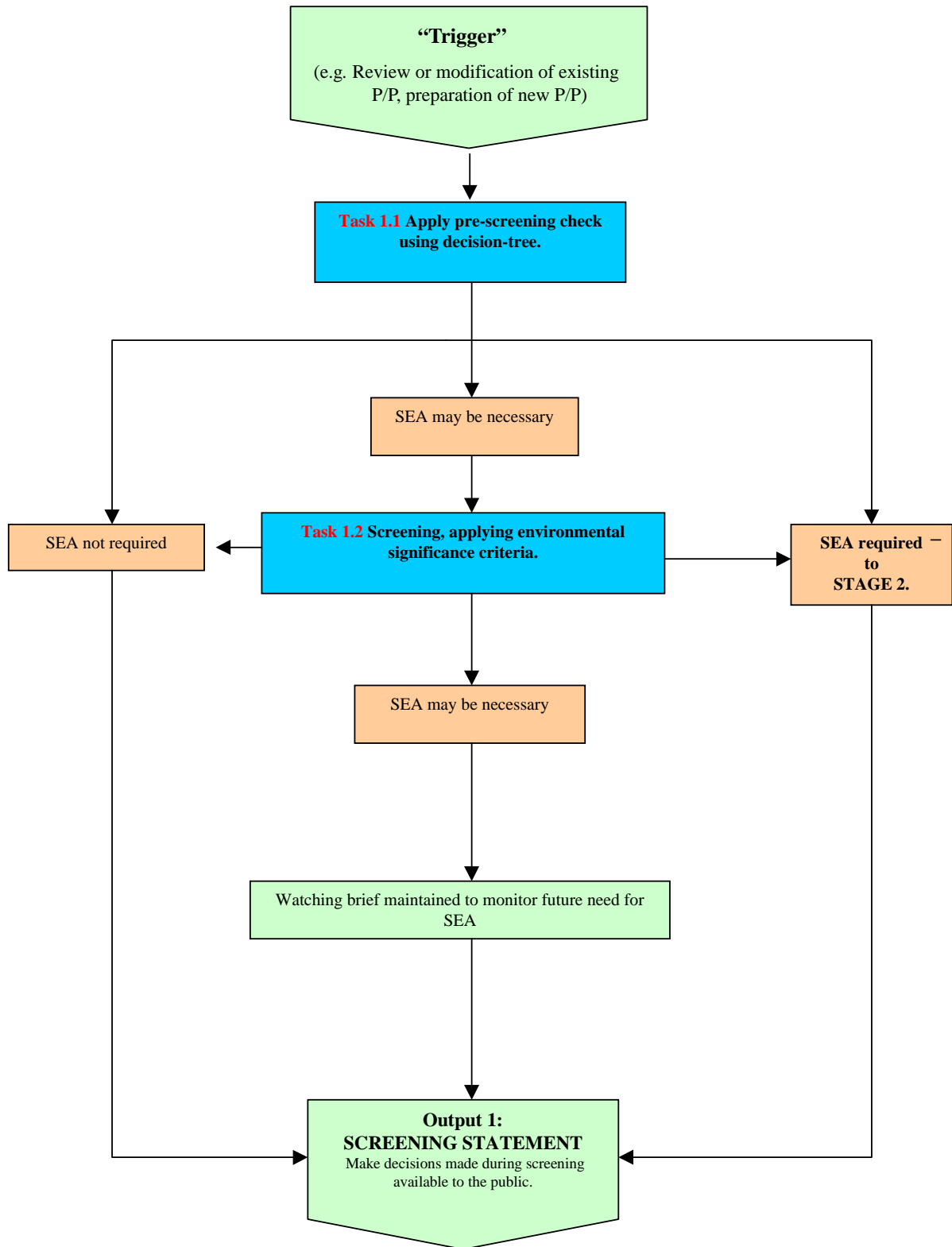


Figure 1. Stage 1 – screening of plans and programmes.

3.2 Stage 1 – Screening of Plans and Programmes

Stage 1 establishes whether the relevant P/P must undergo an SEA. It uses a series of procedural tasks, firstly to consider the overall characteristics of the P/P to

see if it falls within the requirements of the SEA Directive. The second task requires the potential environmental significance of implementing the proposed P/P to be gauged according to a series of significance criteria.

Task 1.1. Apply pre-screening check using decision-tree

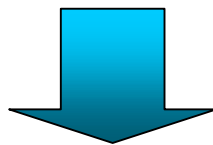
The pre-screening check is based on questions of an administrative nature, which can be rapidly checked by the authority to determine whether the P/P should be taken to the second screening stage. It allows rapid screening-out of those P/Ps that are clearly not going to have any environmental impact and screening-in of those that definitely do require SEA.

A “decision-tree” or flowchart is provided which simplifies the complex wording of the SEA Directive into a systematic and logical series of questions. This is shown in [Fig. 2](#).

The decision-tree uses the criteria set out in the SEA Directive to decide if SEA is required or not. Unlike the environmental significance screening criteria, which are used in [Task 1.2](#), the questions in the decision-tree are more “administrative” in nature and are based upon the status of the P/P in question.

As a result of this Task, the following possible outcomes could arise:

1. P/P applies to one or more of the 11 sectors quoted in the SEA Directive and provides a framework for development consent³ of projects requiring EIA. It should, therefore, be taken forward to Stage 2.
2. P/P will significantly affect a Natura 2000 site and, therefore, requires an assessment under the Habitats Directive. It can be moved forward to Stage 2.
3. The P/P does not fall into any of the sectors covered by the Directive, it will not significantly affect a Natura 2000 site nor does it provide a framework for development consent. It is, therefore, screened-out by the pre-screening check and no further consideration of its possible impacts is required. Under such circumstances, a note, highlighting the screening criteria applied and the decisions taken, would be kept on all relevant files.
4. The P/P is not screened-out and may require more detailed checks to be undertaken (this will apply to a small-scale P/P or minor modifications of a P/P). This may involve the application of “Environmental Significance Screening Criteria” as described below.



³ A “framework for development consent” could be interpreted when the P/P would lead to, or give guidance for, the consent of development projects. This may be observed as the demarcation of areas zoned for specific types of development, measures that identify circumstances under which development will be encouraged or allowed, criteria which may be applied to decisions on development consent or forward programmes that identify certain types of development to be pursued in a particular sector (e.g. wind energy within an Energy P/P).

Task 1.2. Screening, applying environmental significance criteria

Environmental significance screening may be undertaken to assess whether the P/P is likely to result in environmental impacts and should, therefore, be taken forward for SEA. The application of environmental significance criteria will be particularly important in determining whether SEA is required for small P/Ps or modifications to P/Ps. Annex II (2) of the Directive sets out the “statutory” criteria that should be addressed when undertaking this stage. With respect to the potential effects and the area that may be affected, these include:

- the probability, duration, frequency and reversibility of the effects;
- the cumulative nature of the effects;
- the transboundary nature of the effects;
- the risks to human health or the environment (e.g. due to accidents);
- the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);
- the value and vulnerability of the area likely to be affected due to:
 - special natural characteristics or cultural heritage;
 - exceeded environmental quality standards or limit values;
 - intensive land use;
- the effects on areas or landscapes that have a recognised national, community or international protection status.

In applying these criteria, it is recommended that the authority should ask itself the following types of questions with respect to the plan or programme under consideration:

1. Would the plan or programme result in significant changes in the actions, behaviour or decisions of individuals, enterprises, other non-governmental organisations or government that could lead to:
 - the development of infrastructure and buildings or other changes in urban or rural land use?
 - development of land in greenfield areas or areas of nature conservation importance?
 - a negative or beneficial impact on ecological and/or natural resources?
 - changes in society’s consumption of energy and in particular fossil fuels, and, therefore, in emissions of carbon dioxide and other greenhouse gases?
 - changes in society’s consumption of other natural resources (e.g. water, soils, minerals or aggregates)?
 - changes in the amount or type of waste produced (solid, liquid, hazardous) or of pollutants released to water, land or air?
 - changes in emissions of greenhouse gases from other sources (e.g. methane from livestock and landfill sites)?
 - significant changes in travel behaviour?
 - impacts on people and communities, e.g. through increased noise, disturbance or nuisance?

Task 1.2. contd

2. Is the P/P taken into account during the preparation of more detailed P/Ps within the same sector (i.e. in a vertical hierarchy) or P/Ps in other sectors at the same level (i.e. horizontally linked)?
3. Does the local environment present constraints on the development of the geographical area covered by the P/P?
4. Does the P/P implement statutory requirements that may be linked to use of resources, waste production and management or other issues associated with promoting sustainable development?
5. Does the P/P aim to promote sustainable development?

These questions may be adapted to suit the context of the P/P and the nature of particular administrative processes and are based upon Annex II (1) of the SEA Directive. Answering these questions may require brief, targeted discussion with others who have knowledge of the subject areas listed above, e.g. waste, transport and ecology. It is important that the check is not carried out by only one person who may not fully understand the potential interactions of the P/P with a range of environmental media.

After Task 1.2, three possible outcomes could arise:

1. The P/P is not considered likely to have significant effects on the environment and, therefore, an SEA is not required. A record should be kept on file of the outcome of environmental screening.
2. The P/P could have environmental implications but these are not likely to be significant in terms of the Annex II criteria. In this case, the P/P will be subject to an “environmental watching brief” to determine the need to undertake SEA during future reviews of the P/P.
3. The P/P could have significant environmental implications and the nature of the P/P is such that these should be assessed in detail and a full SEA should be undertaken.



Output 1: Screening Statement

The SEA Directive requires that the results of the screening process, as required by Article 3(5) and including the reasons for not requiring an environmental assessment, are made available to the public.

It is suggested that the Screening Statement, which presents the results of the tasks described above, includes:

1. Introduction.
2. Purpose of the Plan or Programme.
3. Results of pre-screening check and results of environmental significance screening if required.
4. Proposed timetable and approach for the SEA process (if an SEA is deemed to be applicable).
5. Contact point for stakeholder comments

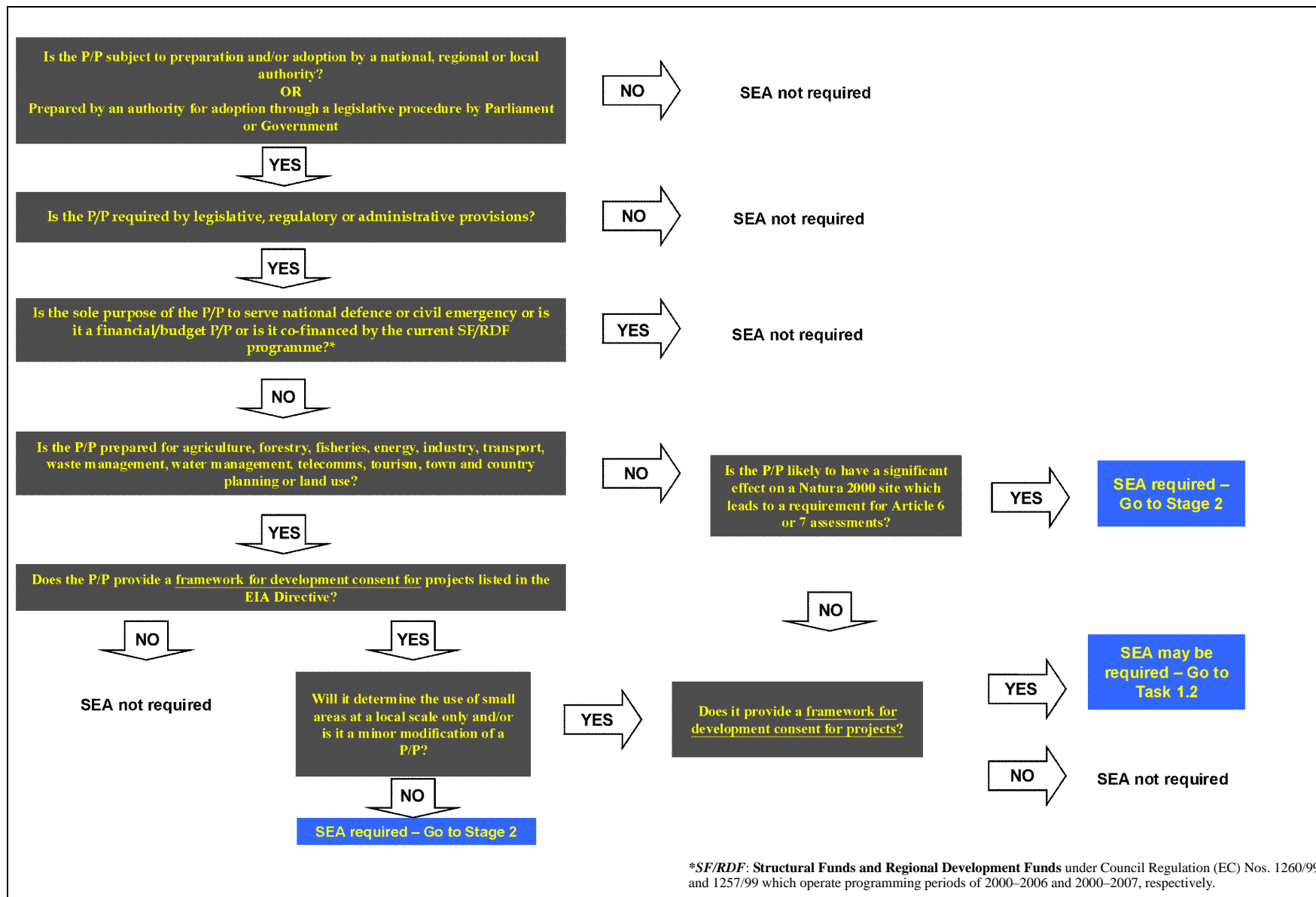


Figure 2. SEA decision-tree to be used in Task 1.1.

3.3 Stage 2 – Scoping the SEA

After deciding in Stage 1 that an SEA is required, Stage 2 is the beginning of the SEA process in earnest. The purpose of Stage 2 is to develop an understanding of the environmental media that may be affected and the key

measures proposed in the P/P to set a framework for identifying and evaluating the impact of the measures on these environmental media. Scoping will ensure that the authority remains focussed upon the important issues and does not waste resources on unnecessary tasks.

Task 2.1. Determine the key elements of the P/P to be assessed

The purpose of this task is to narrow the focus of the early stages of the SEA process to addressing the main “objectives”, “goals” or “strategic aims” within the P/P and the types of activities that are expected to follow from its implementation. These could include development of projects, investment in new technologies, changes to business activity or the activities of individuals or communities (e.g. travel behaviour, consumption patterns), new approaches to regulation and decision-making by governments. This is for the purposes of scoping the SEA process only. The more detailed aspects of the P/P will be assessed whilst they are being prepared later in the overall P/P preparation process.

Using a round-table discussion or workshop brainstorming sessions, the key aspects of the P/P may be identified. If there is a separate SEA team it should liaise closely with the P/P development team at this early stage of the SEA so that key lines of communication are developed. This is particularly important if external advisors are being used to undertake the SEA. Note that the identification of key measures contained in the P/P is a task that will happen anyway, and the SEA process must be integrated into the P/P preparation process.

At this stage, key community needs and constraints should be integrated into the P/P and into the SEA process ensuring that community representatives are consulted and brought into the discussion.



Task 2.2. Determine the environmental issues to be assessed

Once the elements of the P/P are identified, the next task is to consider what aspects of the environment might be affected by their implementation and which of these effects are likely to be significant and, therefore, require investigation. For certain P/Ps, it may be necessary to compile some data on the receiving environment to provide information on sensitivities, constraints and threats.

It is also an obligation under the SEA Directive that information is provided on the “relevant aspects of the current state of the environment”. The relevant aspects can be identified through discussion and consultation at this stage.

It is at this stage that environmental authorities must be consulted on the scope and level of detail of information to be included in the SEA. There are various methods that may be used for consultations. Letters, faxes and telephone calls made to targeted individuals are often most effective and enough time must be allocated to allow responses to be provided. It is necessary to involve them early in the process so that their concerns are addressed.

It is also important to understand that the scope of the SEA process should remain flexible. Environmental authorities may acquire new information, which may be relevant to the P/P, and the SEA process should be able to allow minor changes in the scope throughout the process.

To facilitate the responses from environmental authorities, an information pack can be compiled and sent to the authorities. This should describe the elements of the P/P and the types of actions that are likely to flow from its implementation (e.g. the development of new transport infrastructure, changes in waste-management practices, planned development of county or locality) and an indication of how the scoping process will feed into the SEA.

Narrowing the focus is a key aim of the scoping stage and may be undertaken relatively quickly by a round-table discussion involving representatives with responsibility for the P/P and SEA team as well as outside experts. Standard checklists can be used to identify which environmental aspects need to be considered in terms of their relevance.

At this stage, it is only necessary to determine which environmental issues need to be addressed in the SEA. The detailed investigation of these issues, including baseline data collection and impact predictions, will be carried out in Stage 3.



Task 2.3. Collect and report on relevant international, national and local plans, objectives and environmental standards (existing and emerging) that may influence or impact on the P/P

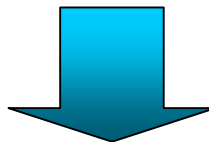
The SEA Directive requires that the SEA process should include looking at other P/Ps, which are related to the P/P being assessed (Annex I (a)). This could include P/Ps in the same geographical area (e.g. Cork County Development Plan and its Indicative Forestry Strategy) or P/Ps in the same sector at different levels (e.g. Wicklow County Development Plan and Blessington Local Area Plan).

These should be analysed and any references to the environmental issues that may be addressed in the SEA should be highlighted to ensure that the P/P being assessed is consistent with other related P/Ps. It will also help to identify where cumulative impacts may arise and require attention in Stage 3.

Similarly, the SEA Directive states that the SEA should also look at *“the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation”*. Identification of these objectives will provide the basis for evaluating the significance of impacts in Stage 3.

SEA practitioners will have to identify which environmental protection objectives are relevant to the P/P being assessed. This is best undertaken by consultation with key staff and organisations that have knowledge of environment and planning policy and law in the EU and Ireland (including external experts).

References to environmental policies, objectives and standards affecting the P/P should be recorded clearly on file for future use.



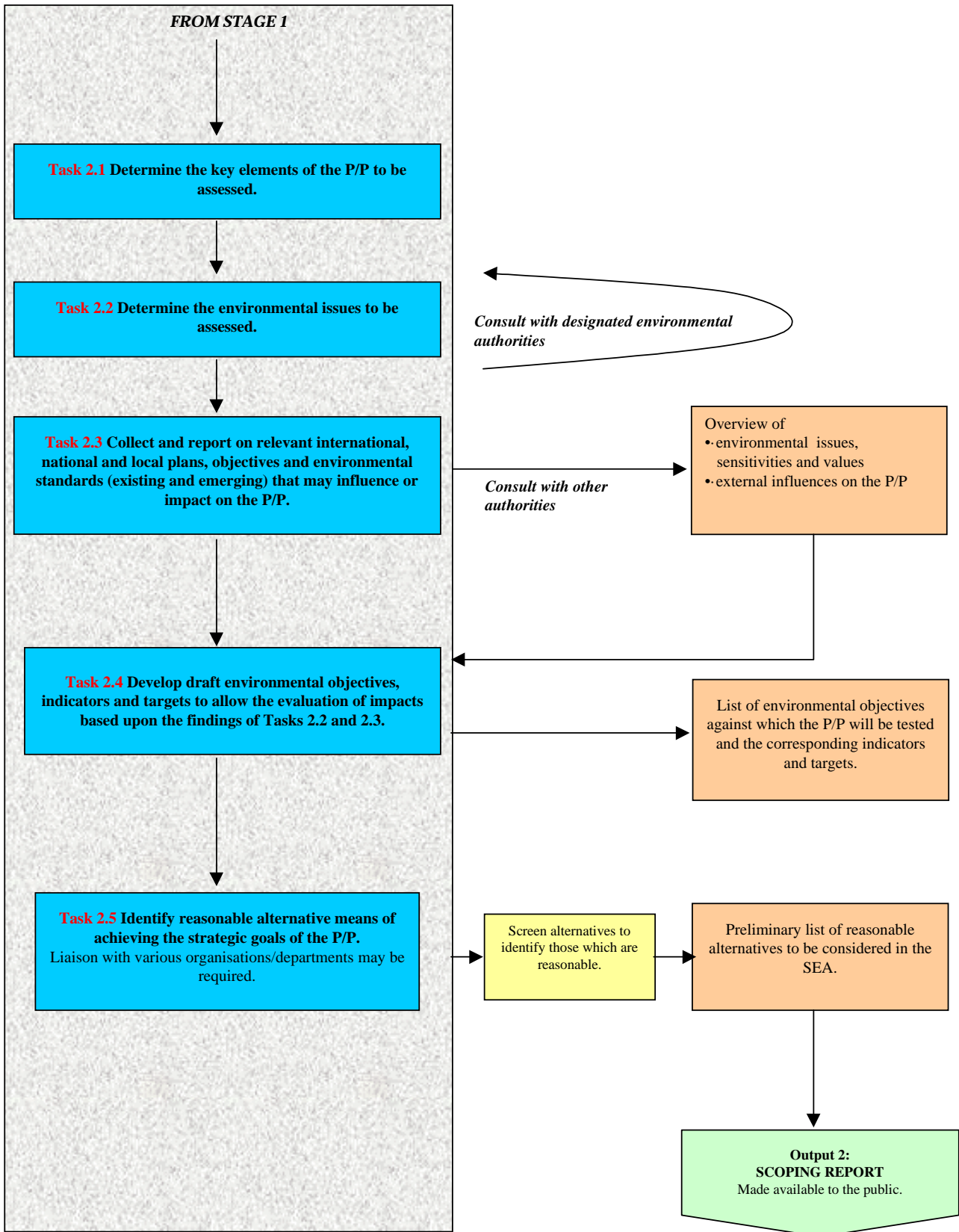


Figure 3. Stage 2 – scoping the SEA.

Task 2.4. Develop draft environmental objectives, indicators and targets to allow the evaluation of impacts based upon the findings of Tasks 2.2 and 2.3

For each environmental issue to be investigated, the next task is to identify criteria against which the performance of the P/P can be judged. These will derive from the environmental policies, objectives and standards identified in [Task 2.3](#).

Environmental objectives provide a benchmark “intention” against which the environmental effects of the plan can be tested. They may often be similar to measures contained in the P/P or derive from objectives that may exist in other related P/P.

e.g. Reduce noise and vibration in sensitive neighbourhoods.

e.g. Increase water quality in surface waters.

e.g. Reduce CO₂ emissions from transport or electricity generation.

e.g. Minimise impacts on designated habitats.

Indicators provide a means of measuring the progress toward achieving the environmental objective over time.

e.g. Noise complaints received over a specified period of time.

e.g. River/lake water quality.

e.g. Tonnes of CO₂ emitted per year.

e.g. Area of designated habitats.

Targets describe the desirable state in relation to each objective in quantifiable terms.

e.g. 50% reduction in noise complaints.

e.g. Meet targets required by phosphorous regulations.

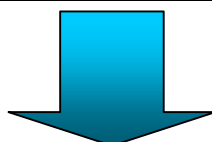
e.g. X tonnes of CO₂ emitted per year by 2020.

e.g. No significant impacts on populations of protected species.

There are certain basic requirements relating to environmental objectives, indicators and targets:

- Objectives must be fit-for-purpose (i.e. capable of being used as SEA “benchmarks”);
- Objectives should address the needs and expectations of stakeholders;
- Objectives and targets must be capable of being revised as new baseline data become available;
- The implementation of the objectives must be capable of being monitored and it must be possible to set challenging but realistic targets using sensible indicators that can be measured with available time and resources.

It is important that the indicators are measurable and targets are realistic. SEA practitioners need to ensure that either there are existing monitoring networks in place to measure the indicator, or that there are resources available to set up new monitoring networks. Quantitative targets and indicators are more useful than qualitative ones since they can generate tangible, real data and, as long as they are realistic, are easier to monitor. Nevertheless, qualitative indicators should not be discounted, as sometimes they are the only option available by which to measure performance.



Task 2.5. Identify reasonable alternative means of achieving the strategic goals of the P/P

The SEA Directive requires that the environmental report should include a discussion of the “*reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme*”. As such, the SEA Report should include a clear discussion on alternative plans or programmes considered during the development of the preferred option.

Consideration of alternatives in SEA may proceed in different ways. For some P/Ps, it may be appropriate and practical to set out alternative versions of the P/P, compare these on broad environmental grounds, and then explain the reasons for selecting the proposed P/P, including the environmental reasons. In other cases (e.g. development plans), it may be more appropriate to consider alternatives as each element of the P/P is developed (e.g. alternative proposals on housing land allocation, alternative policies in siting of new infrastructure), and to summarise these in the SEA Report at the end of the process. In either case, the important requirement is that the environmental implications of alternatives are discussed so that it is evident how environmental considerations have influenced the ‘final product’.

Where overall alternatives to the P/P are presented, it will usually be necessary to restrict these to a small number (e.g. 3–6) for practical reasons. The alternatives should then be selected to represent the range of different approaches to the P/P that are available (e.g. Energy P/P: between continuation of reliance on traditional energy sources, through different levels of focus on renewables to put greater emphasis on maximum energy saving and renewables).

Note that good practice in SEA requires alternatives to be compared in terms of their potential environmental effects, but the reasons for selection of the preferred alternative P/P may also include economic and/or social factors and these may also need to be discussed.

At this stage, the assessment of alternatives may be broken down into three stages (Scott *et al.*, 2001):

1. *Identification of purpose and over-arching objectives of the plan or programme.*
2. *Search for feasible alternatives:* Searching for alternatives should involve broadening the original purpose of each strategic goal or objective in order to identify a range of alternatives. This stage requires consultation between the SEA team, the P/P team (if separate) and other stakeholders. It is also good practice to consult relevant authorities to “test the ground” with certain alternatives.
3. *Selection of alternatives for elaboration and further investigation using criteria:* Since there may be several alternatives available, criteria should be applied to reduce this list to a smaller number of more feasible alternatives. The development of these selection criteria (e.g. public acceptability, minimises energy and resource use) can help in designing and revising alternative objectives (e.g. is it economically, socially and politically acceptable?). These criteria must be robust and capable of withstanding scrutiny if stakeholders do not agree with the choice of alternatives. The precise form of the criteria will depend upon the nature of the P/P.

The consideration of alternatives should always include a minimum comparison between the “do-nothing” or “do-minimum” scenario and the proposed P/P. Indeed, Annex 1 (b) of the SEA Directive requires the SEA practitioner to address the “*relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme*”. Using a do-nothing scenario may not be a reasonable alternative if the preparation of the P/P is required by law, but a do-nothing scenario should be regarded as the benchmark against which the proposed P/P is assessed.



Output 2: Scoping Report

This is not a formal requirement of the SEA Directive but is recommended as good practice. The Scoping Report should be issued early in the P/P process, for example together with the first P/P consultation document.

The purpose of the Scoping Report is to *inform* stakeholders about the key environmental issues, the key elements of the P/P and alternatives within the P/P. It also aims to generate comment from stakeholders on the scope and approach to the SEA and on the P/P and, to this end, it should be made freely available alongside any parallel documents such as Issues Papers or Discussion Papers that describe the P/P.

A possible list of information that should be included in a Scoping Report is presented below. Note that the Report should be clear and concise and should concentrate on the key issues to cater for a broad readership. More complex details and data should be saved for publication in the SEA Report. Authors of the Scoping Report will have to adapt the structure and content of the Report to reflect the nature of the P/P and the readership.

1. Introduction (includes brief introduction to the P/P and the P/P preparation process, the purpose of the Scoping Report).
2. Proposed SEA methodology (includes a time frame and list of consultees).
3. Maps of area to be covered.
4. Key purpose of the P/P (or cross-reference to Issues Paper).
5. Preliminary list of alternatives within the P/P.
6. Key environmental baseline issues.
7. Environmental objectives, indicators and targets.
8. Interaction with other P/Ps.
9. Environmental constraints.
10. Conclusions on proposed scope of the SEA.
11. Sources of data.
12. Contact point for comments.

3.4 Stage 3 – Identification, Prediction, Evaluation and Mitigation of Potential Impacts

The purpose of this stage in the process is to identify and address the likely environmental impacts of the P/P. This will involve:

- Obtaining an understanding of the existing state of the environment with respect to the aspects that may be affected by the P/P.
- Predicting how that environment is expected to change as a consequence of implementing the P/P (and its alternatives).
- Evaluating the significance of these changes in terms of their compliance with the environmental policies, objectives and standards identified during the scoping stage.
- Considering how the P/P can be revised or refined to mitigate significant adverse effects and to maximise any benefits offered by the P/P.

Task 3.1. Establish the baseline environment (existing and future trends)

Before impacts on the environment can be predicted, it is necessary to achieve an understanding of the relevant existing conditions.

This first task in Stage 3 is to collect information on baseline conditions with regard to each type of potential impact. Ideally, this task should be commenced as soon as possible in the SEA process, usually alongside Stage 2.

Data should be collected from existing sources as far as possible but new surveys may be required if an impact is likely to occur in an area where there is little or no information, and where such information is critical to determining strategic impacts.

As Ireland has a history of diverse and irregular environmental monitoring, the absence or shortage of environmental information is likely to be commonly perceived as an issue in SEA. However, it is important to consider carefully how much information is needed to predict and evaluate impacts with reasonable confidence and to avoid SEA becoming a burdensome data-collection exercise, which imposes unacceptable delays on important P/P processes. SEA only needs enough information to make reasonable judgements and often these can be made by experts using relatively few data.

Baseline environmental information will help to identify the following parameters:

- Key environmental resources (e.g. SACs, ancient monuments, landscapes).
- Key environmental sensitivities (e.g. water quality, rare species, archaeology, etc.).
- Key environmental threats (e.g. land contamination, one-off housing).
- Key environmental trends (e.g. changes in water quality, population, etc.).

Baseline environmental data should allow the state of the environment to be identified in objective terms. Often this will mean quantitative measurements of environmental conditions, but it will also include qualitative descriptions of environmental features and the importance of qualitative information should not be underestimated. The data should encompass the environment as it is now (i.e. the most up-to-date data) as well as the environment as it would be expected to change in the absence of the P/P (i.e. in the do-nothing or do-minimum scenario).

- Baseline data should match the scale of the P/P (The Directive states that the level of detail that is to be applied in the plan or programme should dictate the level of detail presented in the SEA Report.);
- Baseline data should be as recent and accurate as is reasonable without imposing unnecessary burdens of new data collection;
- Baseline data should be capable of being presented in a useful manner that can be interpreted by non-specialists;
- Baseline data must be capable of being linked to the environmental objectives, targets and indicators (see later in this section). As a result, there may be a need to revise baseline data requirements during the SEA and P/P development process;
- Baseline data may be presented as maps or summarised in text. Where needed, detailed data should be presented in annexes.

To address data gaps in the short-term, the SEA should report the uncertainty that the data gaps have caused. Data gaps need to be made explicit, not hidden away in the SEA process. In addition, wherever possible, indication of a lack of data should be matched with a commitment to collect the same data as part of the monitoring of the implementation of the plan or programme.

In the long-term, the continuous reporting of such inadequacies should stimulate the relevant bodies to commence data-collection activities and lessen the extent of critical data gaps.

Suggested sources of environmental data are listed in [Appendix A](#).



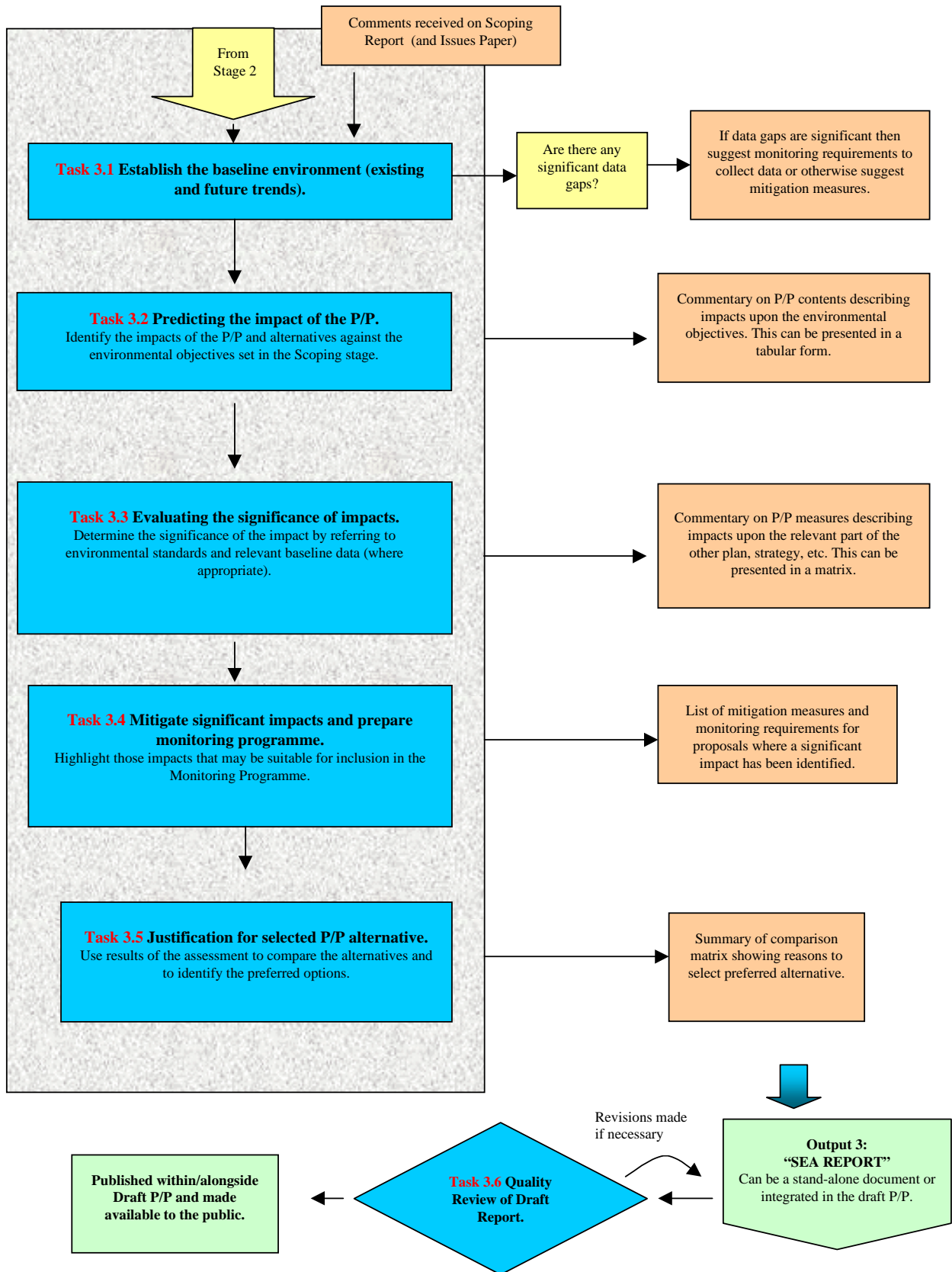


Figure 4. Stage 3 – identification, evaluation and mitigation of potential impacts.

Task 3.2. Predicting the impact of the P/P

The aim of this Task is to identify and describe the effects of the P/P on the environment.

The first requirement is to identify the expected outcomes of implementing each element of the P/P. These may be physical developments (e.g. new roads, waste-disposal facilities), changes in the way businesses operate (e.g. increasing use of certain types of freight), changes in individual or community behaviour (e.g. increased use of public transport), and changes in the actions of national and local government (e.g. granting funds for improved bus services, increasing fuel taxes).

Once expected outcomes have been identified then it is possible to consider what the implications of these might be for the environment. How will these outcomes interact with different aspects of the environment? Predictions of impact can be quantitative or qualitative. What is important is to provide as much information as possible about what is expected to happen in the environment as a consequence of implementing the P/P. Predictions should address:

- the nature of the change (e.g. a decline in air quality, loss of landscape or ecological resources, reduction in amenity, impact on soils or water resources);
- the extent of the changes, described as far as possible;
- the geographic location or extent and the frequency and duration of the impact;
- whether the impact may be temporary or permanent; and
- the probability that the impact will occur.

This last point is especially important in SEA as the outcomes and, therefore, impacts of the P/P will often be uncertain.

The level of detail at which predictions can be made will depend on the nature of the P/P. So, for example, it may be possible to predict the outcomes and impacts of a Waste Management Plan in some detail in terms of what new facilities ought to be built where and how they will affect land, air quality, etc. In contrast, the outcomes of a P/P that would provide subsidies for renewable energy production may be predictable in terms of the national fuel mix and overall CO₂ emissions but not in terms of what types of, and where, renewable energy projects will be built. Therefore, the local impacts on ecology, landscapes and communities will also be unknown. These impacts will, of course, be addressed at the project EIA level.

In some cases, it will be possible to give specific, often quantitative, predictions of impacts (e.g. change in CO₂ emissions, loss of habitats, etc.), but in others it may only be possible to predict likely direction of change (e.g. an increase or decrease in emissions) but not possible to quantify them. It is important, nevertheless, to recognise that both types of prediction are valid and useful, depending on the nature of the P/P.

As a result, the methods used for prediction in SEA can range from complex models through simple calculations to the professional opinion of relevant experts.

In predicting impacts in SEA, as in project EIA, it is important to consider all the possible types of impacts that may occur: direct and indirect, primary, secondary and higher order, short-, medium- and long-term; temporary and permanent; impacts arising from unforeseen or abnormal events and cumulative impacts.

Cumulative impacts may be particularly important in an SEA because a P/P may envisage many different developments proceeding in parallel with each other, and with other changes happening in the area. One of the benefits of carrying out SEA is that it is able to predict future changes in the environment as a result of several developments being given consent under the P/P.

The potential for transboundary effects must also be remembered and it will be necessary to consult neighbouring counties, regions or other administrative areas if transboundary impacts are likely.

The results of predictions can be usefully summarised in a tabular format (sometimes called an impact matrix). This can be particularly useful for comparing the impacts of alternatives. The results can be summarised using grading systems (e.g. high–medium–low, A/B/C, ↑×✓, etc.) but these should not be used alone. The impact prediction should always be presented in reasonable detail so that the reader understands what is likely to happen to the environment and in many cases this is only possible by including a narrative account of such changes. Summary approaches using matrices can be useful for presentation purposes but should always be based on real information set out in tables or text.



Task 3.3. Evaluating the significance of impacts

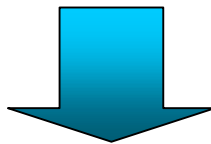
The prediction stage in any impact assessment is essential in describing what will happen to the environment as a consequence of the proposed action. But it is insufficient in itself to fully inform decision-making. The decision-maker also needs to know how important or significant that change is, in order to be able to take it into account. This is the purpose of the evaluation stage.

Prediction will have described the changes that will occur – their nature, scale, geographic scope, duration, reversibility and probability in as much detail as is possible given the nature of the P/P.

Evaluation of significance then requires consideration of various questions, which will establish the importance, or “significance”, of the predicted impact:

- Will the measure in the P/P lead to a risk of environmental standards being breached?
- Could it lead to failure to achieve environmental policies or targets?
- Will it affect environmental resources, which are protected by laws or policies, e.g. Natura 2000 habitats, species, landscapes, water resources, agricultural resources and cultural sites, etc.?
- Could it lead to impacts on environmental resources, which, although not legally protected, are important or valuable?

In summarising the resulting evaluation, it may be helpful to continue the tabular format used for prediction and to present and summarise the findings using a grading system, but, as with prediction, it is important not to rely on this alone, but also to provide real information on what really matters about the impact.



Task 3.4. Mitigate significant impacts and prepare monitoring programme

The third step in the assessment stage is to consider whether there is potential to mitigate any impacts that have been identified as significant. Mitigation may involve preventing impacts altogether, reducing their magnitude as much as possible and/or probability of occurrence, or putting in place measures to remedy effects after they have occurred, or to compensate for them by providing environmental benefits elsewhere.

Mitigation options can range from:

- fundamental changes to the P/P, for example choosing an alternative with a lower impact overall
- to
- “fine tune” elements within the P/P to ensure that their impacts are reduced.

The most usual approach is to refine the wording within a P/P. For example, mitigating a land-use plan could involve adding new environmental objectives into the plan, qualifying or expanding upon proposed planning policies or re-wording proposed policies to achieve greater clarity.

Article 10 of the SEA Directive requires that:

“1. Member States shall monitor the significant environmental effects of the implementation of plans and programmes in order, inter alia, to identify at an early stage unforeseen adverse effects, and to be able to undertake appropriate remedial action.

2. In order to comply with paragraph 1 [above], existing monitoring arrangements may be used if appropriate, with a view to avoiding duplication of monitoring.”

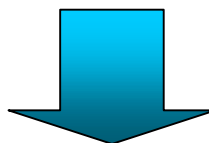
Although it is not possible to predict where unforeseen impacts may arise, where there is a large degree of flexibility in terms of the types of development that may arise as a result of the P/P, this uncertainty should be reflected in the design of the monitoring programme.

As part of the SEA, existing monitoring networks, which can provide data showing changes in the environment attributable to implementation of the P/P, should be used.

In Ireland, there are a variety of sources of environmental monitoring data at local, regional and national levels. The EPA produces a wide range of indicator data in the following reports:

- State of the Environment Reports (every 4 years; next due 2004);
- Environment in Focus Reports (every 4 years; next due 2006);
- Sectoral indicator reports (e.g. Transport, Rural Indicators);
- Annual Water Quality, Air Quality and Waste Reports.

[Appendix A](#) of this report includes examples of where monitoring data can be obtained for a variety of environmental media.



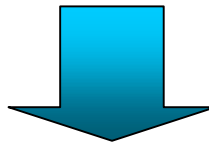
Task 3.5. Justification for selected P/P alternative

This task involves identifying which is the preferred alternative, based upon environmental grounds, and accurately describing the relevant grounds for this choice. It may well be the case that the preferred alternative is not the best in terms of environmental impacts. Where there is a balance to be struck between environmental, economic and social concerns, this should be made clear in the SEA Report.

As stated earlier, it is most important that the do-nothing scenario is considered as a “benchmark” against which the other choices are compared. It should be noted that, in many cases, the option to not develop and implement the P/P might not be a reasonable or even a legal alternative.

SEA practitioners should, therefore, highlight where the chosen alternative provides benefits to the environment as compared to the do-nothing scenario.

Comparisons of alternatives may be presented in tabular form in the SEA Report for ease of interpretation and analysis. As with prediction and evaluation, the use of grades or scores may be helpful for presentation purposes but the reasons for choosing the proposed P/P should always be explained in terms of the actual impacts of the alternatives and their importance.



Output 3: SEA Report

This is the main output of the SEA process and will be the document that most stakeholders will review. The SEA Directive requires that specific information be provided in the “environmental report”.

The information required to be contained in the SEA Report is identified in Annex I of the SEA Directive. Note that this information is subject to conditions in Article 5 (2) of the Directive, which states that information compiled in the SEA Report should take into account:

- The current knowledge and methods of assessment;
- The contents and level of detail in the plan or programme;
- The stage in the decision-making process where the SEA has taken place; and
- The extent to which certain matters are more appropriately assessed at different levels in that process in order to avoid duplication of the assessment (i.e. some matters are better dealt with during a project EIA).

A possible format for this information is suggested below. Those aspects that are required under the SEA Directive are marked with an asterisk:

1. Non-technical summary (may be provided separately)*
2. Introduction
3. SEA Methodology (including timescale, authors, methods used, technical limitations).
4. List of Consultees and Stakeholders
5. Summary of the elements of the P/P measures and any alternatives*
6. Outcomes that may result from the P/P
7. Relationship with other relevant plans and programmes*
8. Description of the baseline environment including the evolution of the environment under the “do-nothing” or “do-minimum” scenarios*
9. Environmental objectives, indicators and targets*
10. Prediction and evaluation of impacts of the P/P (including alternatives)*
11. Incorporation of mitigation measures and assessment results into the P/P*
12. Proposals for monitoring of implementation of the plan*
13. Summary of findings and recommendations (including linking the SEA to other P/Ps and EIAs)
14. Contact point for receiving comments on the SEA Report

The qualities of a good SEA Report will, therefore, include:

- Clear descriptions of the P/P, its outcomes and impacts, avoiding unnecessary use of jargon;
- A logical, coherent structure;
- Effective use of graphics – maps, diagrams, etc. – summary presentation formats such as tables, matrices;
- Consistent style in terms of editorial approach and level of detail.

However, SEA practitioners are encouraged to create a format that not only contains this information but also conveys it in a useful manner to its audience, decision-makers and environmental authorities, and the public in an effective manner. Practitioners should understand the importance of adopting a consistent “house style” for their SEA Report and should avoid turning the report into a public relations document. Using independent consultants to undertake the SEA and prepare the report can help to solve problems of bias. However, impartial reporting is only made possible by clarity, explanation, thoroughness, careful use of language and a commitment to fair reporting. Experience in other SEA systems has shown that the optimum SEA team is composed primarily of in-house staff supported by external expertise.

There are many techniques ranging from those employing graphic-intensive maps and matrices to text-based reports, each of which can be effective in different situations. The best reports tend to use a mixture of both graphical and text-based modes of information so that they communicate effectively with a diverse audience (Curran, 1995).



Task 3.6. Quality Review of Draft SEA Report

The SEA Directive requires Member States to ensure that the SEA documentation is of “sufficient quality” to meet the requirements of the Directive.

The SEA Report may undergo an internal quality review to ensure that the SEA team has addressed all of the requirements of the Directive. However, to ensure that the SEA Report will be understood by a broad readership, an independent review should also be undertaken by someone outside of the SEA team. The SEA Checklist can be used for both internal checks and for independent quality reviews. The SEA Checklist is presented in [Appendix B](#).

SEA practitioners can also use this checklist as a planning and progress review checklist during the SEA process to ensure that the assessment is comprehensive and meets the requirements of the SEA Directive.

Both the SEA Report and the draft P/P should then be made available to the public for a suitable period of time that will allow the documents to be reviewed and responses to be drafted (see Stage 4).



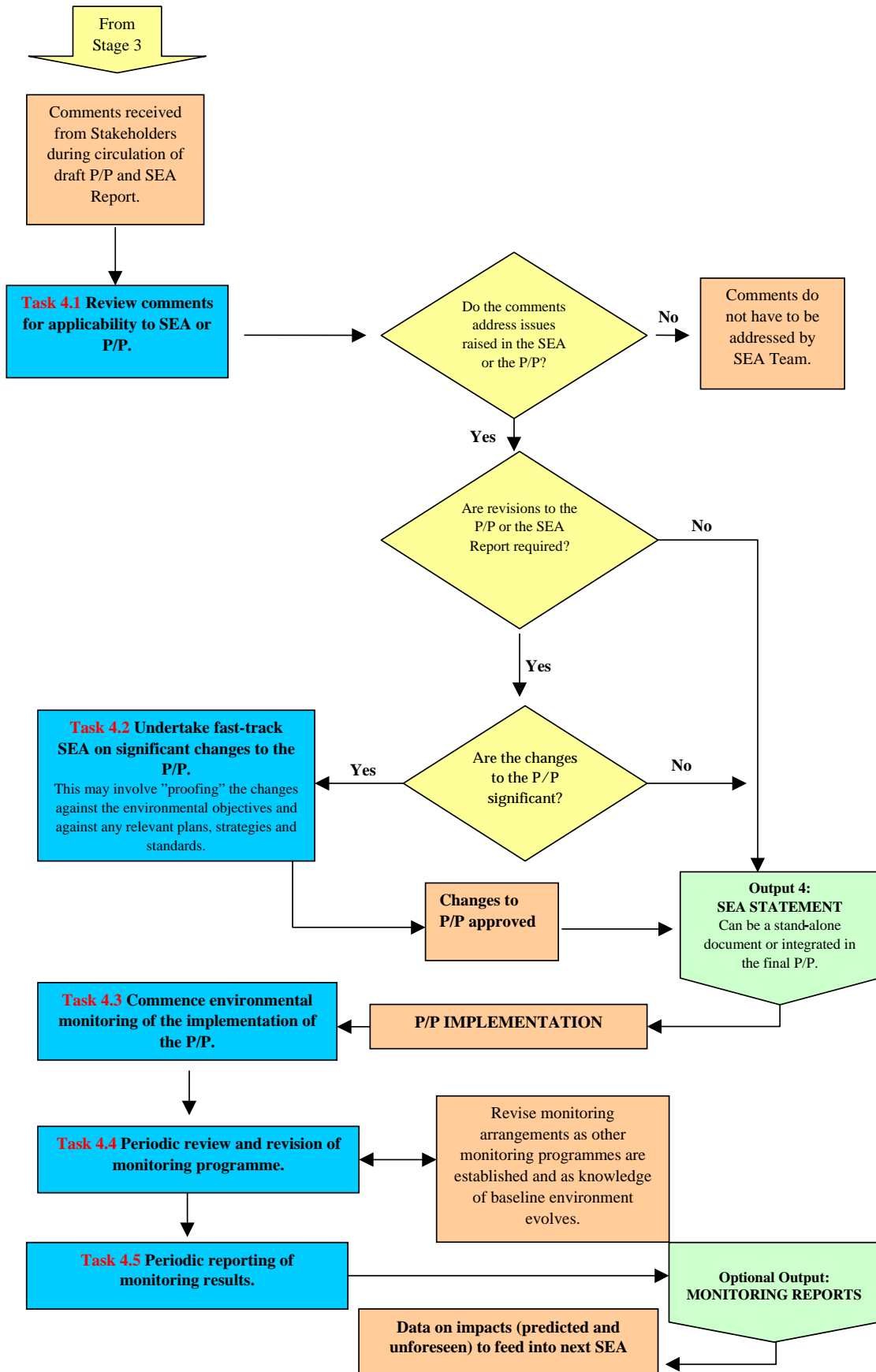


Figure 5. Stage 4 – consultation, revision and post-adoption activities.

Task 4.1. Review comments for applicability to SEA or P/P

Comments will be received from stakeholders during consultation on the draft P/P and SEA Report. Where the P/P has a regional or national significance, it is possible that significant numbers of comments may be received. All comments should be recorded and the authority will have to determine the appropriate response to make with reference to the SEA process:

- No action to be taken.
- Revise assessment.
- Revise P/P.

In order to determine the appropriate response, authorities will have to ask the following types of questions:

- Is the comment relevant to the SEA process or is it better addressed during assessments carried out at other stages (e.g. project EIA)?
- Is the comment likely to lead to the identification of unexpected adverse environmental impacts?
- Is the comment related to environmental, rather than economic or political, issues?
- Is the comment related to any of the environmental objectives developed to assess the impact of the P/P?



Task 4.2. Undertake “fast-track” SEA on significant changes to the P/P

Once the comments have been reviewed, it must be decided if they warrant the revision of the SEA findings and/or warrant the revision of elements of the P/P.

It is acknowledged that changing elements of the P/P based upon public comments is part of the P/P preparation programme for nearly all plans and programmes in Ireland. However, it is important that any proposed changes are subject to assessment so that new significant impacts are not caused. A “fast-track” review will usually be sufficient to keep the SEA process “watertight” so that no revisions pass through the process without being assessed.

A fast-track SEA will involve “proofing” the changes against the environmental standards, objectives and targets and against any other relevant environmental quality objectives, plans, strategies and standards.

Changes resulting from consultations may be more major and, therefore, require detailed reassessment. In this case, the process may need to return to Stage 3.

Once the final form of the P/P has been decided upon, the SEA Statement can be prepared.



Output 4: SEA Statement

The Directive requires certain information to be made available after the decision-making stage has been completed. This information may be compiled into an SEA Statement that can be included in the adopted P/P. The statement, which does not have to be lengthy or complex in content, needs to include the following:

1. Summary of how environmental considerations have been integrated into the plan or programme

This should include a flow-chart showing the stages of the SEA process and a commentary stating how the process was linked to the various stages of P/P preparation.

2. Summary of how the SEA Report and the submissions received from stakeholders have been taken into account

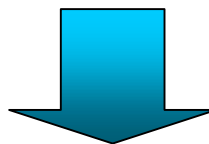
This should summarise the key issues raised in the SEA Report and submissions, and state the reasons why the P/P has been developed or modified to reduce its environmental impact.

3. Reasons for choosing the plan or programme as adopted, in the light of the other reasonable alternatives considered

The statement should identify the other alternatives considered, comment on their potential impacts and explain why the P/P was selected, including any environmental reasons. Reference to the do-nothing scenario should be made.

4. Measures decided concerning monitoring

A proposed monitoring programme should be described, specifying frequency of monitoring, reporting and responsibilities. This will reflect the decisions made in Stage 3, but there may have been revisions made as a result of new information since the publication of the SEA Report.



Task 4.3. Commence environmental monitoring of the implementation of the P/P

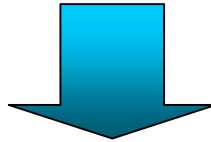
The monitoring programme should commence as soon as the new P/P is adopted.

Note that certain types of P/P, e.g. Waste Management Plans, will have their own monitoring requirements that can sensibly be integrated with the SEA monitoring programme.



Task 4.4. Periodic review and revision of monitoring programme

Many P/Ps may be implemented over several years. It may, therefore, be necessary to revise the monitoring programme periodically so that it takes account of new methods and increased understanding of the baseline environment.



Task 4.5. Periodic reporting of monitoring results

The regular reporting of monitoring results is necessary so that the actual impacts of the P/P can be evaluated. This is an essential element of implementation, as it will help to refine the P/P and scope any revisions to the SEA when the P/P is revised. It will also provide useful information for future assessment of other P/Ps. Therefore, it is good practice to make these results available to the public and other agencies or authorities.

Sometimes the P/P may be amended during its lifetime (e.g. rezoning of land use). Although, at present, this generally occurs due to other pressures (e.g. political and economic), the feedback from monitoring may indicate unforeseen environmental impacts that warrant amending the relevant part of the P/P.

To ensure that verification of the predictions made in the SEA process is carried out effectively, there should be thorough cross-referencing between the monitoring programme and the SEA. There should also be a timetable for reviewing the results of monitoring, and commitments should be recorded to ensure that recommendations for revisions to be made to the SEA procedures can be documented.



***USE RESULTS IN REVISING P/P AND
UNDERTAKING NEXT SEA***

4 Consultation and Public Participation in SEA

4.1 Introduction

There are certain aspects of the SEA process (as set out in the SEA Directive), which will prove to be particularly challenging during implementation. Key amongst these is the role that the public and other stakeholders will have in the process and the influence that these “external” parties will have on the outcome of the SEA process.

The SEA Directive defines the “public” as “*one or more natural or legal persons and, in accordance with national legislation or practice, their associations, organisations or groups*” (Article 2(d)).

This section describes the consultation and public participation requirements of the SEA Directive and proposes consultation methods that may be appropriate at each stage in the SEA process.

4.2 Consultation and Public Participation in SEA

The aims of consultation and participation in SEA are to:

- Enhance transparency in decision-making, by providing information which allows for early identification and mitigation of impacts;
- Provide a more comprehensive understanding of the baseline environment and relevant key individual and community issues and values (so more comprehensive data can be integrated into the preparation of the P/P);
- Obtain information about potential environmental effects at an early stage of the SEA process; and
- Increase understanding, avoiding unnecessary controversy and delays in the decision-making process at later stages due to public opposition arising from lack of understanding.

Table 2 presents the mandatory requirements for consultation and participation under the SEA Directive and suggests ways of making it effective.

Table 2. Consultation and participation in the SEA process.

Stage	Requirement	Opportunities for effective consultation/ participation	Suggested methods
Screening	Environmental authorities must be consulted when undertaking case-by-case screening or when specifying certain types of P/P requiring SEA (Article 3(6)). The outcome of screening must be made available to the public. The “authorities” and the “public” must be identified according to Article 6(3 and 4).	Consultation of the public is not mandatory (under the SEA Directive) during this stage but, if undertaken, will ensure that the authority responsible for deciding if SEA is required, appreciates public views on any environmental issues associated with the P/P.	Focus Groups, Printed Materials, Information Repository
Scoping	Environmental authorities must be consulted on the scope and level of detail to be covered in the SEA (Article 5(4)).	Consultation undertaken early in the <i>Scoping Stage</i> should result in the following benefits: <ul style="list-style-type: none"> • enable local knowledge of the baseline environment to be accessed and understood; • enable early identification of environmental issues and potential impacts; • enable an understanding to be gained of underlying community values which may determine the feasibility of proposing certain alternatives; and • allow for possible mitigation and/or preventative measures to be identified and explored early on. 	Exhibition, Roadshow, Open Days, Online Surveys, Steering Groups, Workshops
SEA reporting	The public and environmental authorities must be given an opportunity to comment on the report. However, “ <i>the detailed arrangements for the information and consultation of the authorities and the public shall be determined by the Member States</i> ” (Article 6(5)). This requirement will ensure that Member States establish a more formal basis for consultation, including deciding exactly where, when and how it should take place. Note that Article 6 states that “appropriate” time frames should be set for consultation responses to be received. Such time frames will vary to reflect the scale and nature of the P/P.	For public consultation and participation to be effective at this stage it is important that: <ul style="list-style-type: none"> • the SEA Report is made available for review sufficiently early to inform the decision-making process (i.e. at the same time as, and not after, the publication of the draft P/P); • the public is notified as to how it should obtain a copy, or view a copy, of the SEA Report (it is usually located in the same location as the draft P/P); • the public has an appropriate time to review the SEA Report (usually the same amount of time as the draft P/P); • comments from the public are encouraged; • comments received are recorded; and • comments received are properly taken into consideration by the decision-makers. 	Focus Groups, Public Meeting, Consensus Conference, Advisory Committee/Steering Groups, Public Display/ Exhibition, Websites
Transboundary consultations	Where there may be significant effects upon a neighbouring Member State, then the neighbouring State may enter into consultations with their own public and environmental authorities (Article 7(2)). In Ireland, this requirement will mainly affect those authorities with administrative boundaries bordering Northern Ireland, although there may be some issues that require transboundary consultations across the Irish Sea with UK national government agencies.	Authorities will have to prepare for such consultations early in the SEA process, in terms of timetabling the SEA and P/P-preparation process and addressing transboundary issues in the scoping stage.	Intergovernmental Fora, Focus Groups, Public Meeting, Consensus Conference, Advisory Committee/Steering Groups, Public Display/ Exhibition, Websites
SEA Statement	Article 9(1) provides for the publication of a statement, which must be made available to the public and to the relevant authorities.	It should describe how environmental considerations, and the views of consultees, have been taken into account in shaping the adopted P/P.	Advisory Committee/ Steering Groups, Website

5 SEA Report Quality

5.1 Introduction

This section describes the task of ensuring the quality of the SEA process and its outputs. It describes the requirements of the SEA Directive in terms of ensuring the quality of SEA reports, and describes a proposed methodology that could be applied to the review of SEA reports in Ireland.

5.2 Requirements of the SEA Directive

“Member States should communicate to the Commission any measures they take concerning the quality of environmental reports.” (Preamble (14))

“Member States shall ensure that environmental reports are of a sufficient quality to meet the requirements of this Directive and shall communicate to the Commission any measures they take concerning the quality of these reports.”(Article 12(2))

As stated above, the directive requires Member States to ensure that the SEA Report meets the information requirements listed in Annex I of the Directive.

There is no requirement for ongoing reviews of the quality of the SEA process in the SEA Directive. However, there is a requirement to demonstrate transparency in decision-making, in screening and in taking the results of the assessment into account, which implicitly requires a clear “audit-trail” to be laid by the SEA practitioners. This audit-trail can be easily checked to evaluate compliance with the Directive and the effectiveness of the process as a whole. Specifically, SEA practitioners should ensure that the following aspects of the SEA process are recorded clearly:

- Record of the screening decision;
- Record of issuance of screening statement;
- Record of consultations with environmental authorities over the level of detail and content of the SEA Report;
- Record of internal quality review of the SEA Report;

- Record of the SEA Report being made available to the public;
- Record of comments received on the SEA Report;
- Record of how comments were taken into account in the final P/P;
- Record of issuance of SEA Statement;
- Record of proposed monitoring programme.

Reviewing the quality of the SEA Report will reveal how effective the process was at generating information on the baseline environment, impacts, mitigation measures, alternatives, etc.

As experience of reviewing SEA reports accumulates, commonly occurring problems can be traced ‘upstream’ to particular aspects of the SEA process and tackled ‘at source’ (Scott *et al.*, 2001). For example, consistent weaknesses might be due to insufficient baseline data, inadequate consultation of environmental authorities, or lack of SEA experience or attitudes of the personnel involved. Once the results of the review have been analysed, any subsequent SEAs should take the results of the review into account to facilitate a better assessment process and, as a result, improved SEA reports.

During this research project, the European Commission’s EIA Review Checklist was revised and amended by ERM to apply to the SEA process and SEA reports. It takes into account the SEA Directive’s requirements and additional features of good practice that should be addressed. Although other Review Checklists could have been chosen, the EC EIA Checklist is used widely by EIA practitioners and is aimed at the practitioner specifically, in contrast with other review checklists that are designed more for comparing EISs and to measure quality changes over time.

The checklist can be used for three purposes:

1. By SEA practitioners, to allow them to internally check the progress of the SEA process to ensure that the correct outputs are being generated.

2. By SEA practitioners, to allow them to internally review the quality of the SEA Report prior to its public release.
3. By SEA practitioners, consultants and third parties, to evaluate the quality of the SEA Report after its

publication.

As shown above, the Checklist that has been generated during this project is not solely designed as a review checklist but can be used as an ongoing verification list. The Checklist is presented in [Appendix B](#).

6 Key Recommendations

Through the research tasks undertaken in preparing this report, a number of recommendations for successful implementation of SEAs in Ireland have been identified. These are set out below.

6.1 Integrating SEA into Existing Procedures

There are several steps that can be taken to integrate SEA effectively into existing plan and programme preparation procedures. These are summarised below:

- In order to integrate the SEA process into specific administrative and legislative structures, the common areas and areas of conflict between the SEA Directive and other requirements should be identified.
- Integrate the team undertaking the SEA with the plan or programme development team.
- Start the SEA process early and plan the process alongside the P/P preparation process.
- Publish the scoping report alongside any Discussion Paper/Issues Paper. It is quite common for authorities to seek the views of the public and other NGOs prior to the preparation of a draft plan or programme. SEA can slot into this stage neatly by issuing a Scoping Report. Even if a Discussion/Issues Paper is not published then a Scoping Report can be prepared internally as a formal record of this stage.
- Undertake Stage 3 (*Identification, Evaluation and Mitigation of Potential Impacts*) **during** the preparation of the draft P/P rather than as an add-on feature.
- Integrate the SEA Report either within the draft P/P or publish simultaneously and promote access to both by the public and other stakeholders.
- Clearly state mitigation measures that will apply either to the implementation of the P/P or to the receiving environment. Mitigation measures must be considered wherever significant impacts are identified. Wherever possible, mitigation should

include enhancement of the receiving environment to allow positive benefits to be delivered.

- Integrate monitoring requirements with any existing monitoring networks, sources of baseline data or ongoing research projects.
- Allow SEA to stimulate key changes to existing P/P-preparation practices including:
 - encouraging decision-makers (and others contributing to the decision) to make their decisions transparent and available to the public;
 - increasing transboundary consultations and addressing transboundary impacts (particularly impacts across county and regional borders and impacts on, and from, Northern Ireland or other Member States);
 - integrating environmental issues much earlier into the P/P-preparation process.
- SEA practitioners should use the SEA Checklist to measure the progress of the SEA process, to identify shortfalls and remedy deficiencies during the process.

6.2 Improving the Methodology

- Screening decisions need to be made publicly available to ensure that the decisions are transparent and to save time and resources when undertaking screening of similar P/Ps.
- A centralised database of baseline environmental data will allow baseline data to be more accessible for reference during the SEA process, where appropriate. SEA practitioners often do not know what data exist or where they can access data. Compiling data sources will be a function of the EPA's Centre of Excellence. The Centre could also be used to maintain monitoring results of the impacts of plans and programmes and make them freely available to authorities undertaking SEAs. However, it is acknowledged that SEA practitioners do not always need to compile detailed environmental data

for the purposes of an SEA and will be more likely to refer to broad “state of the environment” reports and annual environmental monitoring reports.

6.3 Effective Implementation of the SEA Directive

- The proposed methodology should be promoted to authorities to encourage its application prior to the Directive’s deadline of 21st July 2004.
 - Sectoral guidelines for key plans and programmes should be published and formally adopted, where possible, including examples of applying the SEA methodology to relevant plans or programmes.
 - An awareness-raising programme should also be carried out for NGOs, the public and other stakeholders. This should include the provision of leaflets and also workshops to show how to make effective contributions to the SEA process.
- Potential SEA practitioners should be encouraged to undergo training in the use of SEA methodologies and the preparation of SEA reports.
 - In order to improve the quality of the SEA process and the quality of SEA reports, the requirement to publish Scoping Reports should be made obligatory through the appropriate statutory instruments. The use of SEA Checklists should also be formalised, with a range of workshops organised to demonstrate benefits of both pre- and post-publication quality reviews.

7 References

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- Partidário, M.R., 1998. *Significance and the Future of Strategic Environmental Assessment*. Paper presented at an International Workshop on Strategic Environmental Assessment, Tokyo.
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Appendix A: Suggested Sources of Environmental Data

Environmental Issue	Type of data	Source
Biodiversity	Numbers, descriptions and locations of designated areas, National Biodiversity Plan, BIOMAR data, etc.	National Parks and Wildlife Service, Heritage Council, Marine Institute, EDS, County Development Boards, Fisheries Board
Population	Census 2002 data and population trends	Central Statistics Office, County Development Boards, Regional Health Board(s)
Human health	Regional Health Board Statistics	Health and Safety Authority, Public Health Institute, County Development Boards, Regional Health Boards
Fauna, flora	Protected species, species diversity and abundance	National Parks and Wildlife Service, Local Authority Wildlife Officer, County Recorder
Water	Annual Water Quality reports, Drinking Water Quality reports, Groundwater protection zones, Coastal water quality, canals and navigation details, flooding and drainage data	Office of Public Works, EPA, Geological Survey of Ireland (GSI), Marine Institute, Waterways Ireland
Soil	Agricultural quality of soils, potential for contamination	Teagasc, GSI, Local Authorities
Air quality	Local air quality, changes in air quality, sources of emissions	EPA and Local Authority monitoring data
Climatic factor	Long-term climate data, climate-change reports	Met Éireann, EPA
Material assets	Infrastructure, community facilities, open space, services	Local Authority, local Chamber of Commerce
Cultural heritage (including architecture and archaeological heritage)	Lists of protected buildings, sites and monuments, architectural inventories, National Heritage Plan	National Parks and Wildlife Service, Office of Public Works, Heritage Council, Local Authority, Local/Regional Museum, SMR
Landscape	Landscape character types, protected views and landscapes	Landscape Character Assessments, Forest Service, National Parks and Wildlife Service, Heritage Council, Local Authority

Note: Practitioners should be aware of the level of detail of data that is required to make effective prediction and evaluation of potential environmental impacts. The acquisition of data should not be a Task that results in unnecessary burdens on time or resources which would result in delays to the SEA process or the preparation of the P/P.

Appendix B: SEA Checklist

B1 Introduction

This checklist is designed as a method for checking the adequacy of the SEA process and SEA Reports, in terms of compliance with the requirements of the SEA Directive and generally accepted good practice in SEA. It is based on the European Commission's EIA Review Checklist, prepared in 1997 and amended in 2001 by Environmental Resources Management. This original Review Package was intended to *"help developers and their consultants prepare better quality Environmental Impact Statements and competent authorities and other interested parties to review them more effectively, so that the best possible information is made available for decision making."* (ERM, 2001).

It is important to appreciate that the checklist cannot verify whether the information meets national legal requirements. This can only be done by reference to national legislation, which was not yet in place in Ireland during the preparation of the checklist.

It is also not able to verify the technical or scientific quality of the information, or the adequacy of the environmental studies that have gone into its preparation. If reviewers are concerned about the technical adequacy of the studies or the information, advice should be sought from relevant experts.

The SEA Checklist is designed to be used in one or more of three ways:

1. To assess the progress of the SEA process and to ensure that the process is fulfilling the requirements of the SEA Directive prior to the publication of the SEA Report. The Checklist can be used as an internal check that the SEA is comprehensive and that it will serve its desired purpose. The checklist can also be used by the SEA team on an ongoing basis.
2. To assess the adequacy of an SEA Report after it has been published. In this case the output of the checklist is an assessment that the information is either adequate or inadequate. If the information is inadequate the checklist prompts the user to identify what further information is required.
3. To assess the quality of the SEA Report generally for either research or monitoring purposes. So, for example, the checklist can be used to investigate which parts of the information required by the Directive are usually best or worst in quality across a number of SEA Reports, or to investigate the overall quality of SEA Reports submitted for different types of projects, or to investigate trends in quality of SEA Reports over time. This is deemed as being quality review over a longer period of time (adapted from ERM, 2001).

B2 The Qualities of a Good SEA Report

It is important to emphasise that the main aim of the SEA Report is to provide good information for two audiences – the authorities responsible for the preparation of the SEA Report and the public potentially affected by a P/P. The most important thing is, therefore, that it should communicate effectively with these audiences. The summary below distils from the checklist the main characteristics that a good SEA Report should have to meet this objective (adapted from ERM, 2001).

- A clear structure with a logical sequence, for example describing existing baseline conditions, predicted impacts (nature, extent and magnitude), scope for mitigation, agreed mitigation measures, commitments to monitoring, significance of unavoidable/residual impacts for each environmental topic.
- A table of contents at the beginning of the document.
- A clear description of the P/P, its objectives and the measures within it.
- A description of the P/P preparation and approval process and how SEA fits into this.
- A full description of the proposed implementation of the P/P.

- Reads either as a single document with appropriate cross-referencing, or as a clearly identifiable section within the draft P/P.
- Is concise, comprehensive and objective.
- Is written in an impartial manner without bias.
- Makes effective use of diagrams, illustrations, photographs and other graphics to support the text.
- Uses consistent terminology with a glossary.
- References all information sources used.
- Has a clear explanation of complex issues.
- Contains a good description of the methods used for the studies of each environmental topic.
- Covers each environmental topic in a way that is proportionate to its importance and at a level of detail that corresponds to the P/P.
- Provides evidence of consultation.
- Includes a clear discussion of alternatives.
- Makes a commitment to mitigation (with a programme) and to monitoring.
- Has a non-technical summary that does not contain technical jargon.

B3 Structure of the Checklist

The checklist provides quite a lengthy list of questions to be asked about the SEA process and/or SEA Report.

It is divided into eight sections:

1. Description of P/P, potentially affected environment and baseline conditions.
2. Consideration of alternatives.
3. Description of environment likely to be affected by the P/P.
4. Description of the likely significant effects of the P/P.
5. Description of mitigation.
6. Description of monitoring.

7. Non-technical summary.
8. Quality of presentation.

Within each section there are numbered questions. For some questions notes are provided to assist the reviewer.

B4 Instructions for Checking an SEA Report

Step 1

Quickly read the SEA Report to understand how it is organised and where to find things within it.

Step 2

Decide for each question whether or not it is relevant to the specific P/P. If so enter “Yes” in Column 2. When determining if the question is relevant, the reviewer should remember that the Checklist is based upon the SEA Directive and that regarding certain issues as irrelevant should be based upon a robust argument.

At the end of each section of the checklist consider whether there are any special features of the project that mean that types of information not identified in the Checklist could be relevant and add these to the Checklist in the spaces provided (“Other questions on.....”).

Step 3

If a question is identified as relevant, review the EIS in more detail and decide whether the particular information identified in the question is provided and is sufficient for decision-making. If it is complete enter “Yes” in Column 3. If it is not enter “No”.

In considering whether the information is of sufficient quality, the reviewer should consider whether there are any omissions in the information and, if there are, whether these omissions are vital to the P/P process. If they are not then it may be unnecessary to request further information. This will avoid unnecessary delay to the process. Factors to consider will include:

- The legal provisions applying and the factors that the authority preparing the P/P is required to take into account at this stage in the P/P preparation process.
- Whether there are further requirements for environmental assessment at later stages at which

relevant environmental issues will be considered in more detail, for example, project EIA.

- The scale and complexity of the P/P and the sensitivity of the receiving environment.
- Whether the environmental issues raised by the P/P are high profile.
- The views of the public and consultees about the P/P and the degree of controversy.

Note that the questions marked with an asterisk denote where specialist advice may be required to make an accurate judgement.

Step 4

If the answer to a Question is “No” consider what further information is required and note this in Column 4 as well

as any comments that will help to justify the judgements. The reviewer may also wish to make suggestions on where or how the information could be obtained.

Step 5

Once Columns 1–4 have been completed, the final table summarises the adequacy of the SEA Report. Although the original EC EIA Review Checklist allows the EIS to be graded A–E to reflect its quality, this approach is based on an assumption that the reviewer wishes to compare several EISs. It is recommended that the grading of SEA Reports is avoided during the first years of implementation of the Directive and that this is gradually introduced as more SEA Reports become available. Further information on grading is provided in the EC EIA Review Checklist ([ERM, 2001](#)).

SEA Checklist – * Denotes where technical expertise may be required to make a judgement.

No.	Question	Relevant?	Adequately Addressed?	Supporting comments and description of need for further information
Section 1 Description of the P/P, Potentially Affected Environment and Baseline Conditions				
The Objectives and Characteristics of the P/P and the SEA Report				
1.1	Are the need for and objectives of the P/P explained?			
1.2	Is the position of the P/P in the hierarchy of plans, programme and projects explained?			
1.3	Are the type, purpose and lifetime of the P/P and the timing of the SEA in the P/P preparation process clearly explained?			
1.4	Are all additional requirements for environmental assessment (e.g. project-EIA) explained?			
1.5	Are relationships with other P/P identified?			
1.6	Are the main environmental objectives clearly stated in the SEA Report?			
1.7	Are the main measures within the P/P depicted in appropriate graphical ways (e.g. zoning maps, GANTT charts for timescale, sensitivity maps, etc.)?			
1.8	Are international or national environmental protection objectives (including objectives established in related P/Ps) taken into account?			
The Affected Environment				
1.9	Is the local environment likely to be affected by the P/P identified and described (by narrative description and/or by a scaled map)?			
1.10	Are potentially affected areas outside the spatial coverage of the P/P described? (Areas may include neighbouring Counties, catchments, linkage to transport networks, etc.)			
1.11	Are relevant natural resources and environmental sensitivities described? Existing environmental problems and pressures on the environment should be described, including estimates of waste production, pollution levels and other development pressures on the environment.			
1.12	Are the baseline conditions described in a way that reflects availability of data and level of detail of the P/P?			
1.13	Are the baseline conditions linked to environmental objectives, indicators and targets and to proposals for mitigation and monitoring?			
1.14	Are the outcomes that result from implementing the P/P described?			
1.15	For urban or similar development projects, are numbers of and characteristics of new populations or communities described?			
1.16	For P/P involving the potential displacement of people or businesses, are the numbers and other characteristics of those displaced described?			
1.17	For new transport P/P or other P/P generating substantial traffic flows, is the type, volume, temporal pattern and geographical distribution of new traffic generated or diverted as a consequence of the Project described?			
1.18	Is there a description of employment created or lost as a result of the P/P?			
1.19	Are the needs for housing and extra services discussed? (relevant for P/P which may influence population movements)			
Wastes				
1.20	Are the types and quantities of waste potentially generated by the P/P identified? (including construction or demolition wastes, surplus spoil, process wastes, by-products, surplus or reject products, hazardous wastes, household or commercial wastes, agricultural or forestry wastes, site clean-up wastes, mining wastes, decommissioning wastes)			
1.21	Are the options for collecting, storing, treating, transporting and finally disposing of these wastes described?			
1.22	Is the potential for resource recovery from wastes and residues discussed? (including re-use, recycling or energy recovery from solid waste and liquid effluents)			
1.23	Are the methods for estimating the quantities and composition of all residues and emissions identified and any difficulties discussed?			
1.24	Is the uncertainty attached to estimates of residues and emissions discussed?			
Other Questions on Description of the Project				

SEA Checklist (continued) – * Denotes where technical expertise may be required to make a judgement.

No.	Question	Relevant?	Adequately Addressed?	Supporting comments and description of need for further information
Section 2 Consideration of Alternatives				
2.1	Is the process by which the P/P was developed described, and are alternatives considered during this process?			
2.2	Is the baseline situation or the do-nothing or do-minimum scenario described as a benchmark against which other alternatives can be compared?			
2.3	Are the alternatives realistic and genuine?			
2.4	Are the main environmental effects of the alternatives compared with those of the do-nothing or do-minimum scenario?			
2.5	Are alternatives compared using environmental criteria?			
Other Questions on Consideration of Alternatives				
Section 3 Description of Environment Likely to be Affected by the P/P				
Aspects of the Environment				
3.1	Is the baseline environment that may be affected by the P/P and the surrounding area described?			
3.2	Are the key biodiversity issues of the area that may be affected by the P/P and the surrounding area described and illustrated on appropriate maps, including any designated or protected species, sites or areas?			
3.3	If relevant to the nature of the P/P, are the topography, geology and soils of the land described?			
3.4	Are demographic, social and socio-economic conditions (e.g. employment) in the area described?			
3.5	If relevant to the nature of the P/P, is the water environment of the area described? (including running and static surface waters, groundwaters, estuaries, coastal waters and the sea and including run-off and drainage. NB: not relevant if water environment will not be affected by the Project)			
3.6	If relevant to the nature of the P/P, are the water quality and use of any water resources that may be affected by the Project described? (including use for water supply, fisheries, angling, bathing, amenity, navigation, effluent disposal)			
3.7	If relevant to the nature of the P/P, are local, national or global climate and air quality described?			
3.8	If relevant to the nature of the P/P, is the existing noise climate described? (NB: not relevant if acoustic environment will not be affected by the Project)			
3.9	If relevant to the nature of the P/P, is the existing situation regarding light, heat and electromagnetic radiation described? (NB: not relevant if these characteristics of the environment will not be affected by the Project)			
3.10	Are any material assets in the area that may be affected by the P/P described? (incl. buildings, other structures, mineral & water resources)			
3.11	Are any locations or features of archaeological, historic, architectural or other community or cultural importance in the area that may be affected by the P/P described, including any designated or protected sites?			
3.12	Is the landscape of the area that may be affected by the Project described, including any designated or protected landscapes and any important views or viewpoints?			
3.13	Are any future changes in any of the above aspects of the environment, that may occur in the absence of the P/P, described? (the so-called do-nothing scenario)			
Baseline Data Collection Methods				
3.14	Has the "receiving environment" been defined widely enough to include all the area likely to be significantly affected by the P/P?			
3.15	Have relevant national and local agencies been contacted to collect information on the baseline environment?			
3.16	Have sources of data and information on the existing environment been adequately referenced in the SEA Report?			
3.17	Does the level of detail of the baseline data reflect the level of detail in the P/P?			
3.18	Are any important gaps in the data on the existing environment identified, and the means used to deal with these gaps during the SEA process explained?*			
3.19	If data collection would be required to adequately characterise the baseline environment but it has not been practicable for any reason, are the reasons explained and proposals set out for the data collection to be undertaken at a later stage?			
Other Questions on the Description of the Environment				

SEA Checklist (continued) – * Denotes where technical expertise may be required to make a judgement.

No.	Question	Relevant?	Adequately Addressed?	Supporting comments and description of need for further information
Section 4 Description of the Likely Significant Effects of the P/P				
Scoping of Effects				
4.1	Is the process that defined the scope of the P/P and the SEA Report described?			
4.2	Is it evident that a systematic approach to scoping was adopted?			
4.3	Is it evident that full consultation was carried out during scoping?			
4.4	Are the comments and views of consultees presented?			
Prediction of Direct Effects				
4.5	Are direct, primary effects on land uses, people and property described, where relevant?*			
4.6	Are direct, primary effects on geological features and characteristics of soils described where relevant?*			
4.7	Are direct, primary effects on fauna and flora and habitats described where relevant?*			
4.8	Are direct, primary effects on the hydrology and water quality of water features described where relevant?*			
4.9	Are direct, primary effects on uses of the water environment described where relevant?*			
4.10	Are direct, primary effects on air quality and climate described where relevant?*			
4.11	Are direct, primary effects on the acoustic environment (noise or vibration) described where relevant?*			
4.12	Are direct, primary effects on heat, light or electromagnetic radiation described where relevant and, where appropriate, quantified?*			
4.13	Are direct, primary effects on material assets and depletion of non-renewable natural resources (e.g. fossil fuels, minerals) described?*			
4.14	Are direct, primary effects on locations or features of cultural importance described where relevant?*			
4.15	Are direct, primary effects on the quality of the landscape and on views and viewpoints described where relevant and, where appropriate, illustrated?*			
4.16	Are direct, primary effects on demography, social and socio-economic condition in the area described where relevant and, where appropriate, quantified?*			
4.17	Are primary and secondary effects on human health and welfare described and, where appropriate, quantified? (e.g. health effects caused by release of toxic substances to the environment, health risks arising from major hazards associated with the Project, effects caused by changes in disease vectors caused by the project, changes in living conditions, effects on vulnerable groups)*			
4.18	Are impacts on issues such as biodiversity, global climate change and sustainable development discussed where appropriate?*			
Prediction of Other Effects				
4.19	Are secondary effects on any of the above aspects of the environment caused by primary effects on other aspects described where relevant? (e.g. effects on biodiversity, fauna, flora or habitats caused by soil, air or water pollution or noise; effects on uses of water caused by changes in hydrology or water quality; effects on archaeological remains caused by desiccation of soils)			
4.20	Are temporary, short-term effects caused only during short-term activities under the P/P described?			
4.21	Are permanent effects described?			
4.22	Are long-term effects on the environment caused over the lifetime of the P/P?			
4.23	Are indirect effects on the environment caused by consequential actions described? (consequential actions are other P/Ps, e.g. to provide new goods or services needed for the P/P to house new populations or businesses stimulated by the P/P)			
4.24	Are cumulative effects on the environment described? (For further guidance on assessment of cumulative impacts see http://europa.eu.int/comm/environment/eia/eia-support)			
4.25	Are the geographic extent, duration, frequency, reversibility and probability of occurrence of each effect identified as appropriate?			
4.26	Are the methods used to predict effects described, and are the reasons for their choice, any difficulties encountered and uncertainties in the results discussed?			
4.27	Where there is uncertainty about the precise effect of the P/P on the environment are worst-case predictions described?			
4.28	Are impacts described on the basis that all proposed mitigation has been implemented, i.e. are residual impacts described?			
4.29	Is the level of treatment of each effect appropriate to its relevance to the measures within the P/P? Does the discussion focus on the key issues and avoid irrelevant or unnecessary information?			
4.30	Is appropriate emphasis given to the most severe, adverse effects of the P/P with less emphasis given to less significant effects			

SEA Checklist (continued) – * Denotes where technical expertise may be required to make a judgement.

No.	Question	Relevant?	Adequately Addressed?	Supporting comments and description of need for further information
Section 4 Description of the Likely Significant Effects of the P/P (continued)				
Evaluation of the Significance of Effects				
4.31	Is the significance or importance of each predicted effect clearly explained by reference to environmental objectives, standards, and the baseline data?			
4.32	Where effects are evaluated against legal standards or requirements, are appropriate local, national or international standards used and relevant guidance followed?			
4.33	Are positive effects on the environment described as well as negative effects?			
Other Questions relevant to Description of Effects				
Section 5 Description of Mitigation				
5.1	Where there are significant adverse effects on any aspect of the environment is the potential for mitigation of these effects discussed?			
5.2	Are the measures that are proposed to mitigate effects clearly described, and is their effect on the magnitude and significance of impacts clearly explained?			
5.3	If the effect of mitigation measures on the magnitude and significance of impacts is uncertain is this explained?			
5.4	Is it clear whether there are binding commitments to implement the proposed mitigation or that the mitigation measures are just suggestions or recommendations?			
5.5	Are the authority's reasons for choosing the proposed mitigation measures explained?			
5.6	Are responsibilities for implementation of mitigation measures, including funding, clearly defined?			
5.7	Where mitigation of significant adverse effects is not practicable or the authority has chosen not to propose any mitigation, are the reasons for this clearly explained?			
5.8	Is it evident that the SEA Team considered the full range of possible approaches to mitigation including measures to reduce or avoid impacts by modifying policies in the P/P, adopting alternative strategies, locations, changes to implementation plans and measures to repair or remedy impacts and measures to compensate impacts?			
5.9	Are arrangements proposed to monitor and manage residual impacts?			
5.10	Are any negative effects of the proposed mitigation measures described?			
Other Questions on Mitigation				
Section 6 Description of Monitoring				
6.1	Where there are significant adverse effects on any aspect of the environment are there clear commitments to monitor the implementation of the P/P?			
6.2	Are the authority's reasons for choosing the proposed monitoring programme explained?			
6.3	Are responsibilities for implementation of the monitoring programme clearly defined?			
6.4	Where monitoring is not practicable or the authority has chosen not to propose any monitoring are the reasons for this clearly explained?			
6.5	Is reference made to the use of existing monitoring networks?			
6.6	Is the use of monitoring data as a means of verifying the predictions made during the SEA process discussed?			
Other Questions on Mitigation				

SEA Checklist (continued) – * Denotes where technical expertise may be required to make a judgement.

No.	Question	Relevant?	Adequately Addressed?	Supporting comments and description of need for further information
Section 7 Non-Technical Summary				
7.1	Does the SEA Report include a non-technical summary?			
7.2	Does the summary provide a concise but comprehensive description of the P/P, its environment, the effects of the P/P on the environment and the proposed mitigation?			
7.3	Does the summary highlight any significant uncertainties about the P/P and its environmental effects?			
7.4	Does the summary explain the P/P–preparation process and the role of SEA in this process?			
7.5	Does the summary provide an overview of the approach to the SEA?			
7.6	Is the summary written in non-technical language, avoiding technical terms, detailed data and scientific discussion?			
7.7	Would it be comprehensible to a member of the public?			
Other Questions on Non-Technical Summary				
Section 8 Quality of Presentation				
8.1	Is the SEA Report available in one or more clearly defined documents?			
8.2	Is the document(s) logically organised and clearly structured so that the reader can locate information easily?			
8.3	Is there a table of contents at the beginning of the document(s)?			
8.4	Is there a clear description of the SEA process that has been followed?			
8.5	Is the presentation comprehensive but concise, avoiding irrelevant data and information?			
8.6	Does the presentation make effective use of tables, figures, maps, photographs and other graphics?			
8.7	Does the presentation make effective use of annexes or appendices to present detailed data not essential to understanding the main text?			
8.8	Are all analyses and conclusions adequately supported with data and evidence?			
8.9	Are all sources of data properly referenced?			
8.10	Is consistent terminology used throughout the document(s)?			
8.11	Does it read as a single document, with cross-referencing between sections and between the SEA Report and the P/P used to help the reader navigate through the document(s)?			
8.12	Is the presentation demonstrably fair and, as far as possible, impartial and objective?			
8.13	Is an “SEA Statement” to be published after the adoption of the P/P, describing how the P/P has taken the findings of the SEA into account?			
Other Questions on Quality of Presentation				
OVERALL APPRAISAL OF THE SEA REPORT				
If the reviewer wishes to use the Checklist to make an overall appraisal of the quality of SEA Report, this can be done using the table below.				
No.	Topic	Adequately Addressed?	Comment and any requirements for further information	
1	Description of the P/P, Potentially Affected Environment and Baseline Conditions			
2	Consideration of Alternatives			
3	Description of Environment Likely to be Affected by the P/P			
4	Description of the Likely Significant Effects of the P/P			
5	Description of Mitigation			
6	Description of Monitoring			
7	Non-Technical Summary			
8	Quality of Presentation			
Overall Assessment:				
Comment:				