Cumulative effects in screening and scoping

Existing EC guidance and guidance produced by other member states of IFIs

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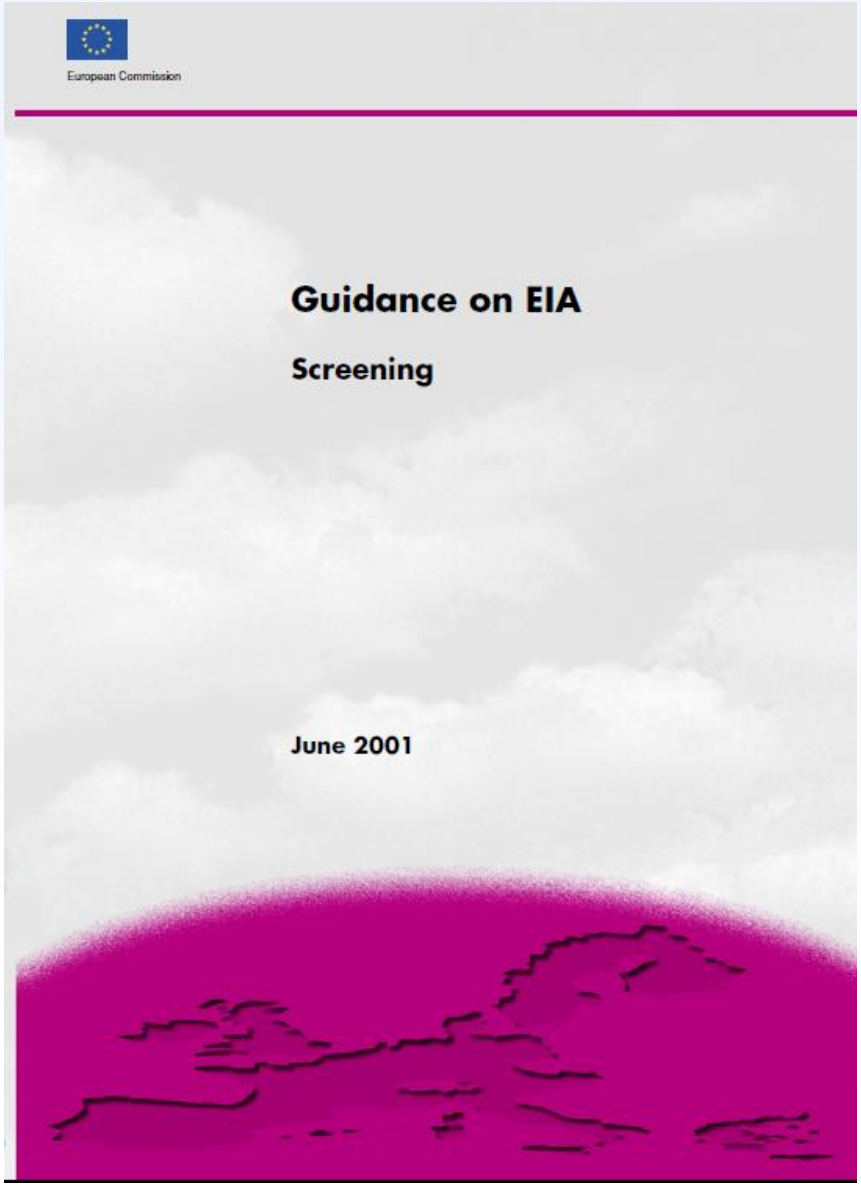
Ljubljana, 15.06.2016

Cumulative Effects in screening (for EIA), EC Guidance



http://ec.europa.eu/environment/archives/eia/eia-guidelines/g-screening-full-text.pdf

*under revision

Cumulative Effects in screening (for EIA), EC Guidance

PART B PRACTICAL GUIDANCE ON SCREENING

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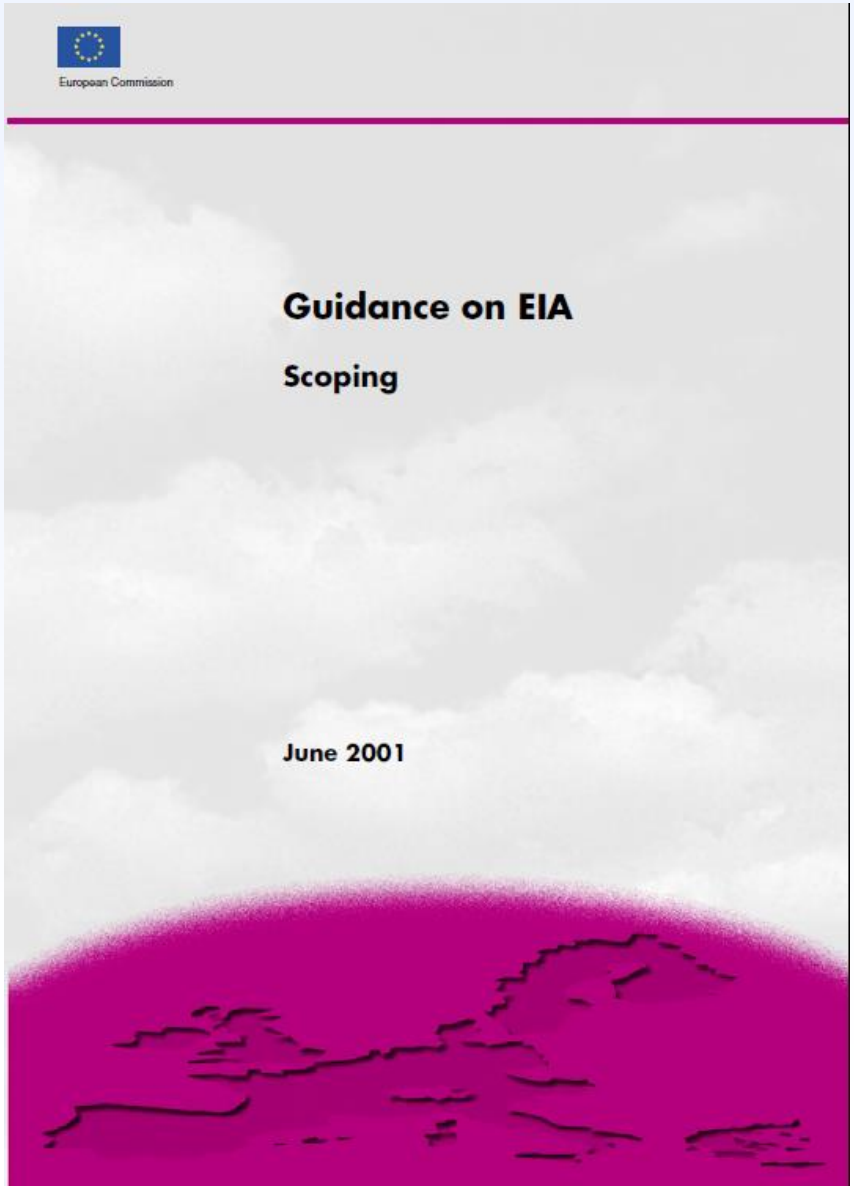
Cumulative Effects in screening (for EIA), EC Guidance

THE SCREENING CHECKLIST

Questions to be Considered For further guidance on factors to be considered see the more detailed questions listed in the Scoping Guidance	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
Brief Project Description:		
1. Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc)?		
2. Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or in short supply?		
3. Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?		
4. Will the Project produce solid wastes during construction or operation or decommissioning?		
5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air?		
6. Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?		
7. Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal wasters or the sea?		
8. Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?		
9. Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?		
10. Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?		
11. Are there any areas on or around the location which are protected under international or national or local legislation for their ecological, landscape, cultural or other value, which could be affected by the project?		

10. Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?

Cumulative Effects in scoping (EIA), EC Guidance



http://ec.europa.eu/environment/archives/eia/eia-guidelines/g-scoping-full-text.pdf

*under revision

Cumulative Effects in scoping (EIA), EC Guidance

PART B PRACTICAL GUIDANCE ON SCOPING

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B2 Use of the Guidance

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B4 Scoping Information and Outputs

- B4.1 Information for Scoping
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B5 Scoping Consultations

- B5.1 Who to Consult
- B5.2 How to Consult
- B5.3 Essentials for Effective Scoping
- B5.4 Constraints on Scoping Consultation

B6 Scoping Tools

- B6.1 Identifying Significant Effects
- B6.2 Identifying Possible Alternatives and Mitigation

CHECKLIST OF INFORMATION NEEDED FOR SCOPING
CONSULTATIONS CHECKLIST
SCOPING CHECKLIST
CHECKLIST OF CRITERIA FOR EVALUATING THE SIGNIFICANCE OF IMPACTS
CHECKLIST ON ALTERNATIVES AND MITIGATION MEASURES

Cumulative Effects in scoping (EIA), EC Guidance

CHECKLIST OF INFORMATION NEEDED FOR SCOPING

It is important to remember that this information can only be requested if the developer can reasonably be expected to have it at the stage in the development of the project that has been reached. Where there are gaps and uncertainties these will be identified and taken into account.

2. Characteristics of the Project

- Brief description of the proposed project.
- Reasons for proposing the project.
- A plan showing the boundary of the development including any land required temporarily during construction.
- The physical form of the development (layout, buildings, other structures, construction materials, etc).
- Description of the main processes including size, capacity, throughput, input and output.
- Any new access arrangements or changes to existing road layout.
- A work programme for construction, operation and commissioning phases, and restoration and after-use where appropriate.
- Construction methods.
- Resources used in construction and operation (materials, waster, energy, etc.)
- The relationship with other existing/planned projects.
- Information about alternatives are being considered.
- Information about mitigating measures which are being considered
- Other activities which may be required as a consequence of the project (*eg* new roads, extraction of aggregate, provision of new water supply, generation or transmission of power, increased housing and sewage disposal).
- Details of any other permits required for the project.

Cumulative Effects in scoping (EIA), EC Guidance

CHECKLIST OF INFORMATION NEEDED FOR SCOPING

It is important to remember that this information can only be requested if the developer can reasonably be expected to have it at the stage in the development of the project that has been reached. Where there are gaps and uncertainties these will be identified and taken into account.

4. Characteristics of the Potential Impact

A brief description of the likely impacts of the project considering the following factors:

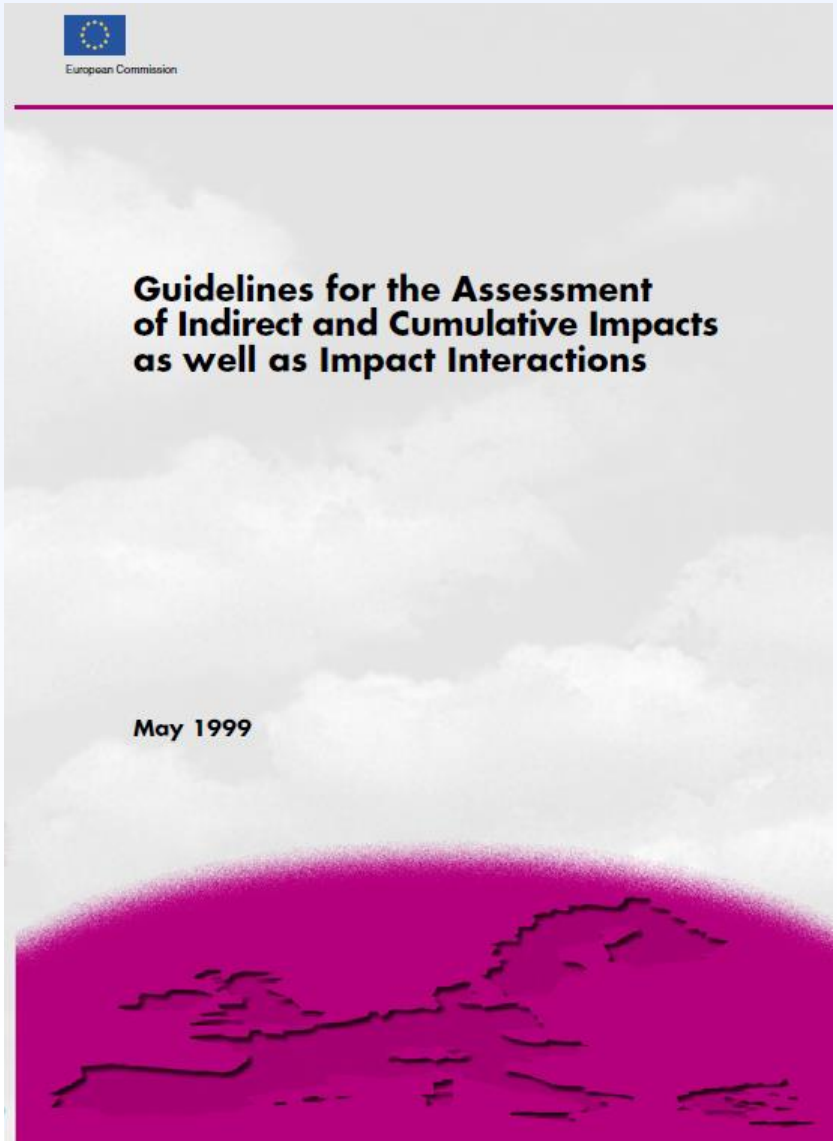
- Impacts on people, human health, fauna and flora, soils, land use, material assets, water quality and hydrology, air quality, climate, noise and vibration, the landscape and visual environment, historic and cultural heritage resources, and the interactions between them.
- Nature of the impacts (*i.e.* direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative).
- Extent of the impact (geographical area, size of the affected population/habitat/species).
- Magnitude and complexity of the impact.
- Probability of the impact.
- Duration, frequency and reversibility of the impact.
- Mitigation incorporated into the project design to reduce, avoid or offset significant adverse impacts.
- Transfrontier nature of the impact.

Cumulative Effects in scoping (EIA), EC Guidance

PART 1 OF THE SCOPING CHECKLIST: QUESTIONS ON PROJECT CHARACTERISTICS

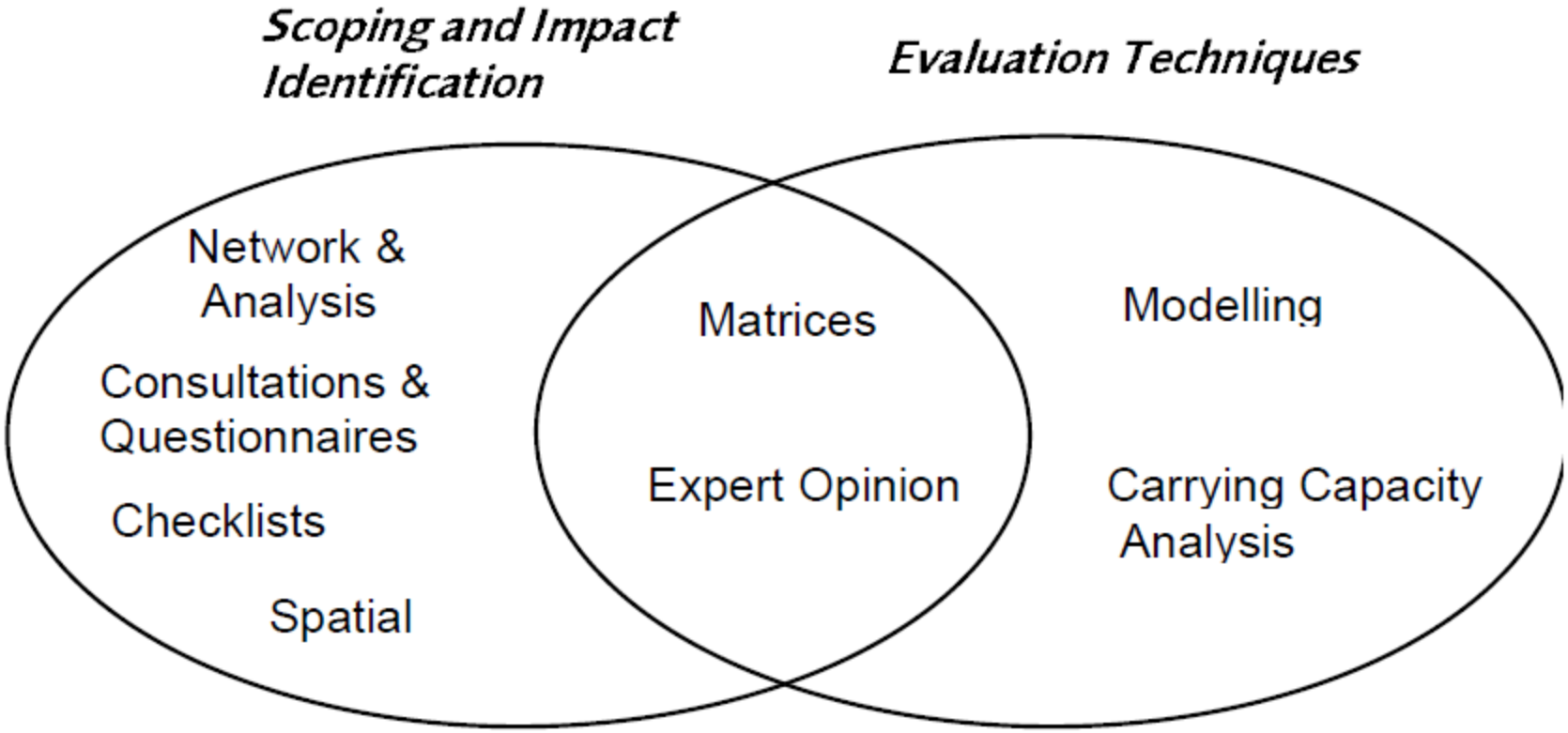
Question - Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?				
9.1	Will the project lead to pressure for consequential development which could have significant impact on the environment eg more housing, new roads, new supporting industries or utilities, etc?			
9.2	Will the project lead to development of supporting facilities, ancillary development or development stimulated by the project which could have impact on the environment eg: • supporting infrastructure (roads, power supply, waste or waste water treatment, etc) • housing development • extractive industries • supply industries • other?			
9.3	Will the project lead to after-use of the site which could have an impact on the environment?			
9.4	Will the project set a precedent for later developments?			
9.5	Will the project have cumulative effects due to proximity to other existing or planned projects with similar effects?			

Cumulative Effects (scoping and EIA report), EC Guidance



http://ec.europa.eu/environment/archives/eia/eia-studies-and-reports/pdf/guidel.pdf

Cumulative Effects (scoping and EIA report), EC Guidance



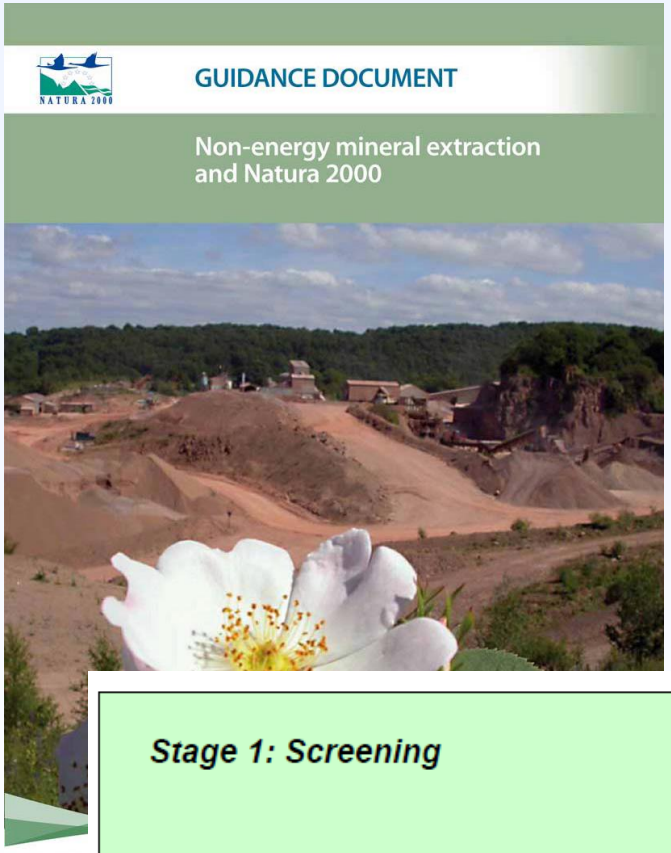
Cumulative Effects (scoping and EIA report), EC Guidance

Method	Description	Advantages	Disadvantages
Checklists	Provide a systematic way of ensuring that all likely events resulting from a project are considered. Information presented in a tabular format.	• Systematic method • Can develop 'standard' checklist for similar projects.	• Can allow oversight of important effects • Nature of cause-and-effect relationships not specified.
Spatial Analysis	Uses Geographical Information Systems (GIS) and overlay maps to identify where the cumulative impacts of a number of different actions may occur, and impact interactions. Can also superimpose a project's effect on selected receptors or resources to establish areas where impacts would be most significant.	• GIS flexible & easy to up date. • Can consider multiple projects and past, present & future actions. • Allows clear visual presentation	• GIS can be expensive & time consuming. • Difficult to quantify impacts. • Problems in updating overlays.

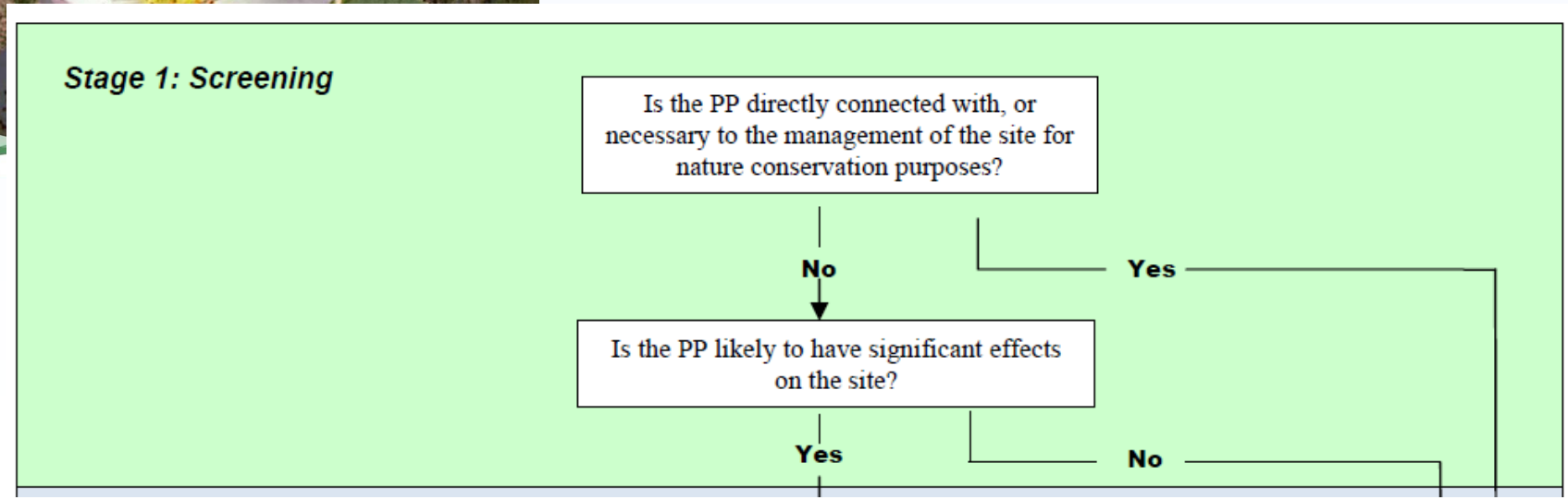
Cumulative Effects (scoping and EIA report), EC Guidance

Method	Description	Advantages	Disadvantages
Network and Systems Analysis	Based on the concept that there are links and interaction pathways between individual elements of the environment, and that when one element is specifically affected this will also have an effect on those elements which interact with it.	• Mechanism of cause and effect made explicit. • Use of flow diagrams can assist with understanding of impacts.	• No spatial or temporal scale. • Diagrams can become too complex.
Matrices	A more complex form of checklist. Can be used quantitatively and can evaluate impacts to some degree. Can be extended to consider the cumulative impacts of multiple actions on a resource.	• Provides a good visual summary of impacts. • Can be adapted to identify and evaluate to some degree indirect & cumulative impacts and impact interactions. • Matrices can be weighted/ impacts ranked to assist in evaluation.	• Can be complex and cumbersome to use.

Cumulative Effects in screening (Habitat's Directive), EC Guidance for non –energy extraction



http://ec.europa.eu/environment/nature/natura2000/management/docs/neei_n2000_guidance.pdf



Cumulative Effects in screening (Habitat's Directive), EC Guidance for non –energy extraction

Screening is required for:

- Both ***plans*** that serve as a framework for development consents and individual ***projects.*** This ensures that the potential impacts on Natura 2000 are taken into account at both the strategic planning level and at the level of each individual project[48].
- Plans or projects affecting sites classified under the ***Birds Directive*** and sites designated under the ***Habitats Directive***. They are both part of the Natura 2000 network.[49]
- Plans or projects both ***inside*** and ***outside*** the Natura 2000 site if they are likely to have a significant effect on the Natura 2000 site[50]. For instance, a NEEI development located outside a Natura 2000 site could still have a significant effect on a Natura 2000 site because it affects the hydrology of the site.
- ***New permits, extension of existing permits and resumption of old permits*** for NEEI activities (see also Case C-201/02 related to EIA[51] and C-226/08 related to Art. 6(3)) where they are considered likely to have a significant effect on a Natura 2000 site.

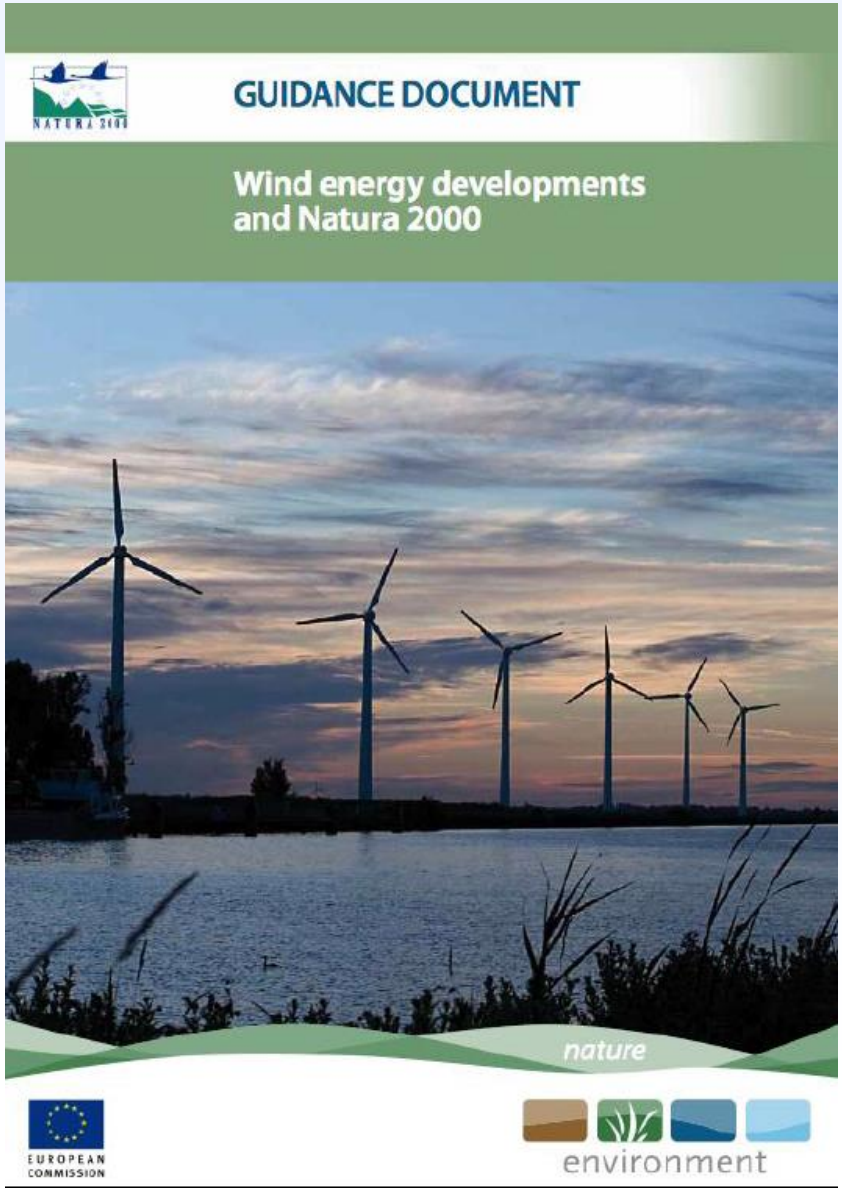
Cumulative Effects in screening (Habitat's Directive), EC Guidance for non –energy extraction

Looking at potential cumulative effects

Key questions to be considered at the stage of screening:

- Identify the geographical scope of the plan or project, and its main characteristics (e.g. extraction methods, minerals to be extracted etc.)
- Identify all Natura 2000 sites that might be affected by the plan or project. Identify the qualifying interests of the Natura 2000 sites concerned (i.e. the habitats and species for which the sites are designated) and the sites' conservation objectives.
- Determine which of those species and habitats could be significantly affected by the planned activities.
- Analyse other plans or projects which could, in-combination with the planned activities, give rise to a likely significant effect on Natura 2000 sites (e.g. it is important to consider all other planned or existing extraction activities).
- Analyse the possible interactions between the plan or project activities, either individually or in combination with other plans or projects, and the qualifying interests, the ecological functions and processes that support them.

Cumulative Effects in screening (Habitat's Directive), EC Guidance for wind farming



http://ec.europa.eu/environment/nature/natura2000/management/docs/Wind_farms.pdf

Cumulative Effects in screening (Habitat's Directive), EC Guidance for wind farming

Screening is required for :

- Both *plans* that serve as a framework for development consents and individual *projects*. This ensures that the potential impacts on Natura 2000 are taken into account at both the strategic planning level and at the level of each individual project[121].
- Plans or projects affecting sites classified under the *Birds Directive* and sites designated or proposed to be designated under the *Habitats Directive*. They are both part of the Natura 2000 network.[122]
- Plans or projects both *inside* and *outside* the Natura 2000 site if they are likely to have a significant effect on the Natura 2000 site. For instance, a wind farm development located outside a Natura 2000 site could still have a significant effect on certain species for which the site is designated (such as bats) because they cause the species to be displaced from their habitual breeding or foraging areas within the site.

Cumulative Effects in screening (Habitat's Directive), EC Guidance for wind farming

5.3.3 Looking at potential cumulative effects

The screening process also applies to plans or projects *in combination with other plans or projects*. It may be that one wind farm project alone might not have a significant effect but, if taken in combination with other plans or projects (wind farm or other developments) within the area, the cumulative effects may turn out to be significant.

Other plans or projects to be considered in this case include those that have already been completed, those that are approved by the planning authorities, or those that are currently undergoing planning approval.

The geographical scale over which these cumulative effects need to be considered will depend on the exact circumstances and scale of the plan or project being studied but should cover a sufficiently large area to capture any cumulative effects that may arise with the project under assessment, having the transboundary aspect in mind, when relevant. Again, the relevant nature conservation authorities will be able to help identify the possible plans or projects that need to be considered as part of the in-combination test.[125]

[125] A possible (but still preliminary) approach to assessing the cumulative effect of onshore wind farms has been proposed by The Scottish Natural Heritage (SNH 2009b).

Cumulative Effects in screening (Habitat's Directive), Scottish Natural Heritage

Scottish Natural Heritage
All of nature for all of Scotland

Guidance

ASSESSING THE CUMULATIVE IMPACT OF ONSHORE WIND ENERGY DEVELOPMENTS

March 2012

Contents

SECTION 2: WHEN TO TAKE ACCOUNT OF CUMULATIVE IMPACTS

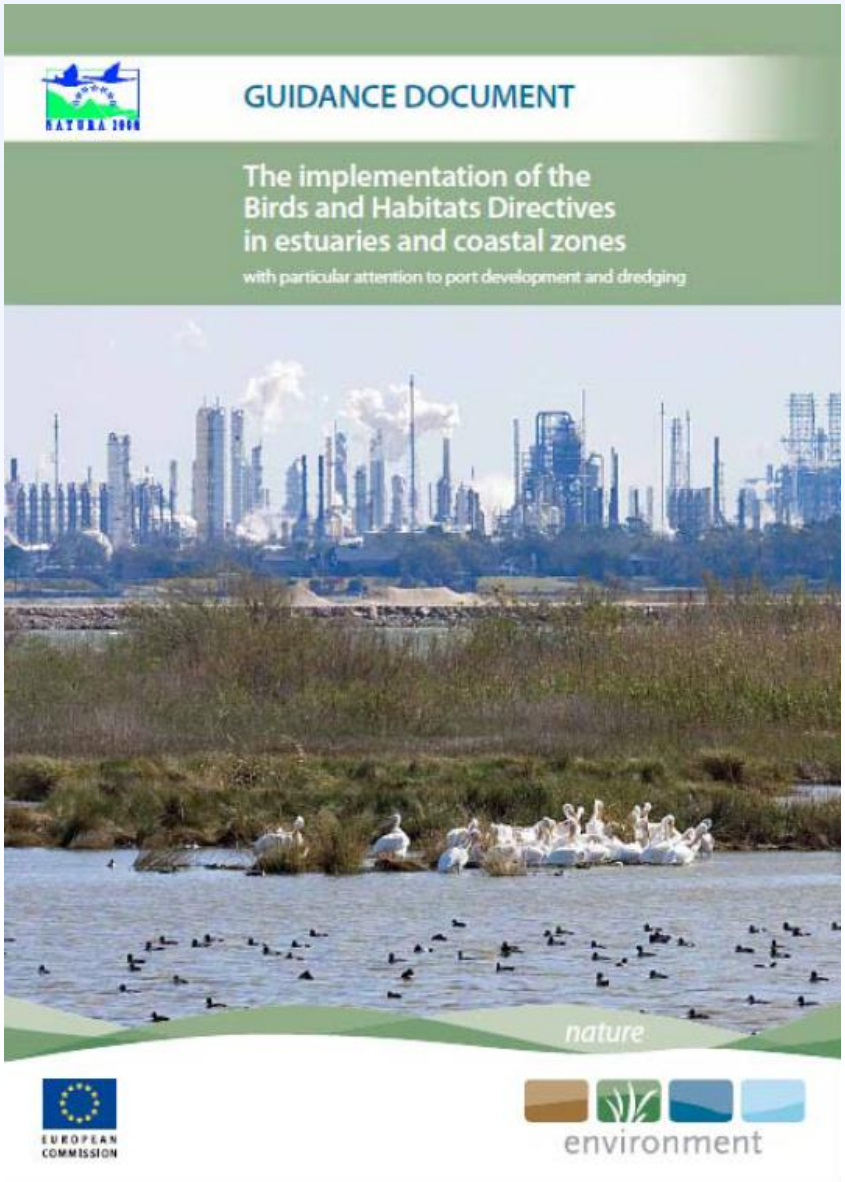
Assessing Cumulative impacts in strategic planning

Assessing cumulative impacts in development management

Which windfarms to include in the assessment

http://www.snh.gov.uk/docs/A675503.pdf

Cumulative Effects in screening (Habitat's Directive), EC Guidance for ports



http://ec.europa.eu/environment/nature/natura2000/management/docs/Estuaries-EN.pdf

Cumulative Effects in screening (Habitat's Directive), EC Guidance for ports

- If a strategic plan or programme does not contain enough details to undertake a full appropriate assessment according to Article 6(3) of the Habitats Directive, the environmental report prepared for the Strategic Environmental Assessment (SEA) should help pave the way to make, at project level, an appropriate assessment and, if needed, to help prepare a derogation procedure following Article 6.4 of the Habitats Directive. In this case the SEA should already identify projects likely to have significant negative effects on Natura 2000 sites and which would need to be subject to an appropriate Art. 6(3) assessment during the project authorisation process.

- Cumulative effects of projects should best be identified and assessed already during the elaboration of spatial plans.

Cumulative Effects in screening (Habitat's Directive), EC Guidance for aquaculture

Guidance on
Aquaculture and Natura 2000

Sustainable aquaculture activities in the context of the Natura 2000 Network

Environment

http://ec.europa.eu/fisheries/cfp/emff/doc/guidance-aquaculture-natura2000.pdf

Cumulative Effects in screening for SEA, EC Guidance

IMPLEMENTATION OF DIRECTIVE 2001/42 ON THE ASSESSMENT OF THE EFFECTS OF CERTAIN PLANS AND PROGRAMMES ON THE ENVIRONMENT

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http://ec.europa.eu/environment/archives/eia/pdf/030923_sea_guidance.pdf

Cumulative Effects in screening for SEA, EC Guidance

3.61. Applying the criteria for determining potential environmental effects requires a comprehensive and systematic approach. To enable this to be achieved, some of the elements identified in Annex I may also be relevant. For example, for identifying likely significant effects the 'receptors' of these effects should be considered (see the list of issues in Annex I (f), i.e. *biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between these factors).* The characteristics noted in the footnote to Annex I(f) should also be taken into account (i.e. whether the effects are *secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative).* The

Strategic Environmental Assessment Guidance / screening example from Scotland

http://www.gov.scot/Publications/2013/08/3355/3

1. The characteristic of the plan
1(a) the degree to which the plan sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources
Plans that establish a framework or prescribe a decision making process, are more likely to generate significant effects. Greater weight should be given to plans that go further than broad policies by allocating resources or setting out where development takes place. *For example, Supplementary Guidance for Developer Contributions would not state where or what future development should take place. Where in contrast, Supplementary Guidance on wind energy developments would provide guidance on where windfarms should be built, and is therefore more likely to lead to significant environmental effects.*
1(b) the degree to which the plan influences other plans including those in a hierarchy
On its own, the response to this question would not necessarily provide a measure of significance. It can however be a helpful component of a wider analysis. Establishing how far a plan influences other plans, can help to define to what extent important environmental decisions are being taken. *For example: plans produced by the Regional Transport Partnerships establish the broad strategic goals that have to be achieved within the region. These are influential for determining the likely content and focus of the next level, within the local transport plans.*
1(c) the relevance of the plan for the integration of environmental considerations in particular with a view to promoting sustainable development
A plan that has the potential either to reduce or restrict certain environmentally harmful elements, within other plans, has to be viewed as having the potential for significant environmental effects, albeit beneficial ones. *For example, a plan that has environmental criteria, such as identifying areas with known air quality issues as a means of restricting where other plans can locate new transport infrastructure is likely to require assessment.*
1(d) environmental problems relevant to the plan
Certain types of plan by their nature can raise significant environmental issues. To gauge significance, it can be helpful to explore whether a plan could cause or exacerbate known environmental problems within the area of the plan, be constrained or affected by existing problems, or contribute to solving or reducing them. *Examples could include a renewable energy plan within a sensitive landscape which has already been affected by change, or a housing development near designated sites where the condition of these sites has been recorded as declining.*

Strategic Environmental Assessment Guidance / screening example from Scotland

1(e) the relevance of the plan for the implementation of European Community legislation on the environment (for example, plan linked to waste management or water protection)
European Community legislation on the environment is extensive. It is therefore beneficial if a Responsible Authority identifies the specific Community legislation of relevance to the plan being considered. In certain circumstances, the links can be obvious, *For example, a River Basin Management plan would primarily relate to the Water Framework Directive; whereas a minerals plan would consider the Mining Waste Directive.*

2. The characteristics of the effects and the area likely to be affected
2 (a) the probability, duration, frequency and reversibility of the effects
The more complex, widespread, long lasting or serious the environmental effects, the more likely that an assessment would be required. If an effect is likely to be short term, not repeated and easily reversible, it is less likely to be considered a significant effect. All environmental topics listed in the 2005 Act should be considered.
2 (b) the cumulative nature of the effects
Cumulative effects can be considered in terms of synergistic effects, additive impacts and secondary effects. Cumulative effects can arise from the combined effects of plans. They can also arise as a result of interaction between different components of a single plan. *For example - proposals to enhance connectivity in a high level transport strategy may collectively result in fragmentation of natural habitats. Similarly, a number of development proposals along a linear route, such as a transport corridor, may cumulatively affect the landscape qualities experienced along that route.*
2 (c) transboundary nature of the effects
Transboundary environmental effects arise when a plan being prepared by one Member State is likely to affect another Member State. Plans in Scotland are unlikely to result in transboundary effects. *Examples have included national level marine related plans that extend to the limits of territorial waters and have the potential to effect mobile species or the international use of marine waters.*

Strategic Environmental Assessment Guidance / screening example from Scotland

2 (d) the risks to human health or the environment (for example, due to accidents)

Consideration has to be given to whether a plan which could give rise to issues such as an increase in pollution, noise, vibration, and other environmental problems, has implication for human health too.

Plans which have social impacts, e.g. proposals to reduce levels of crime or increase access to further education, are less directly covered by the terms of the 2005 Act. However, practitioners may opt, as good practice or to address local concerns, to explore wider health implications through a voluntary Health Impact Assessment.

For example, contaminated land and flooding could have an effect directly on physical and mental health and wellbeing, mineral extraction plans or waste plans, could raise concerns about dust or odours from identified sites.

2 (e) the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected)

This is an important means for distinguishing between strategic and project scale assessment. High level plans typically cover a larger plan area, whereas plans such as design frameworks cover a specific site, where the principle of development has already been established and assessed. There is therefore an important connection between the spatial extent of a plan and the magnitude of the likely environmental effects.

However, scale is not the only measure: local effects can be significant where they arise in particularly sensitive areas, whilst some national plans may be judged not to have significant environmental effects. This judgement has to be undertaken on a case by case basis by a Responsible Authority.

2 (f) the value and vulnerability of the area likely to be affected due to-

(i) special natural characteristics or cultural heritage;
(ii) exceeded environmental quality standards or limit values; or
(iii) intensive land-use.

This criterion tests whether the areas likely to be affected are specially designated areas and / or more generally valued or vulnerable. Gauging the likely environmental effects of a plan in terms of capacity or limits can be complex as even small environmental effects may have a 'tipping' effect. At the screening stage, a full analysis of this criterion is not necessary.

Strategic Environmental Assessment Guidance / screening example from Scotland

2 (g) the effects on areas or landscapes which have a recognised national, Community or international protection status
Practitioners need to consider carefully the extent and degree to which a plan is likely to affect designated sites e.g. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar Sites, National Nature Reserves, Sites of Special Scientific Interest (SSSI) and National Scenic Areas (NSAs). Effects on a European designated nature conservation site, which are likely to lead to a Habitats Regulations Appraisal (HRA), are also likely to trigger the requirement for a SEA. It is important, when considering the potential effects on such sites, to look beyond the site boundaries to recognise areas and species which form part of the integrity of the designated sites. *For example, the designated site may be a breeding area for a protected species of bird but their feeding grounds may lie outside the site.*

In the event that a Responsible Authority and the Consultation Authorities cannot reach agreement on the likely magnitude of potential environmental effects arising from a plan and whether they could be significant, it can be useful to have further discussions with the relevant Consultation Authorities to discuss the screening opinion. In some circumstances, further insights into the plan or additional environmental information may add clarity and help to resolve the matter.

EIB Environmental and Social Handbook

http://www.eib.org/attachments/strategies/environmental_and_social_practices_handbook_en.pdf

Remarks

- There are numerous guidance documents at EC, MS and IFI level

- When consulting other MS guidance on assessing cumulative impacts, one needs to focus on elements that could be applicable to their own National context