renewableUK
The voice of wind & marine energy

www.RenewableUK.com

Cumulative Impact Assessment Guidelines

Guiding Principles For Cumulative Impacts Assessment In Offshore Wind Farms

June 2013

RUK13-020-4

Contents

Acknowledgements:
Many thanks to the following for their input into the development of this report:

Martin Broderick – Senior Technical Director, WSP Environmental
Stephen Hull – ABPmer
Professor Riki Therivel – Levett Therivel
Dr Jake Piper – Oxford Brookes University
Dr Elizabeth Masden – ERI
Dr Matthew Denwood – University of Glasgow
Alan Pearson – Senior Consultant, WSP Environmental
Andrew Tinsley – Tinsley Environmental

Disclaimer:
The guiding Cumulative Impacts Assessment (CIA) principles in this document are non-statutory and have not been necessarily tested in the courts. If in doubt as to any legal implications of CIA legislation as it currently stands, legal advice should be sought in the first instance.

Executive Summary

Introduction

This document, funded by a grant from the Natural Environmental Research Council (NERC), sets out guidelines to follow in assessing cumulative impacts of offshore wind farms. The document was produced by WSP consultants, with input and co-ordination from RenewableUK. This document is chiefly aimed at planning and offshore industry professionals with an interest in the application of Cumulative Impact Assessments (CIAs) in the context of the offshore wind farm consenting process, as well as environmental and public stakeholders with an interest in regulation and guidance in this sector.

Background

The requirement to asses cumulative effects was originally set out in the European Environmental Impact Assessment (EIA) Directive 85/337/EEC (since amended by further Directives) and by the EC Habitats Directive 92/43/EEC. 'Cumulative impacts', according to European Commission (EC) guidelines (May 1999), should mean 'impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project'.

Over the last few years the CIA has become an issue of increasing importance for offshore wind developers. In a study by RenewableUK and NERC 'Cumulative Impact Assessment (CIA) has been identified as an area of concern causing substantial delays of up to 42 months in some Section 36 applications in the approval of planning consents for offshore wind farms.'[1]

Solutions

In the document we consider a number of practical solutions in order to overcome the challenges of CIA. These including defining what a meaningful assessment is, and tackling challenges on scoping, data, assessment and monitoring and mitigation.

The document recommends that scoping takes place early on with clear boundaries outlined at the earliest possible opportunity with key stakeholders and Government. Furthermore, it recommends that data is shared to a greater extent and that the CIA influences both mitigation and monitoring plans.

1. CIA in Offshore Wind Farms, RenewableUK and NERC, 2012

1.0 Introduction

The offshore wind sector is an industry of strategic national importance, which can help us secure our energy supplies, reduce our dependence on imported fossil fuels and protect our environment by reducing CO_2 emissions. It is an industry on which our clean-energy future rests.

However, this potential is made more difficult by the challenges posed by Cumulative Impacts Assessments (CIAs) and in-combination assessments, whereby the impacts of multiple projects or activities create a cumulative impact greater than or different to that of each individual project. Three projects in Round 2 were delayed by over three years due in part to uncertainties over the assessment of cumulative impacts, and the increasing scale of Round 3 makes the potential impacts and, correspondingly the challenges, greater. Delays and/or rejections to renewable projects offshore could inhibit the ability of the UK to meet its binding 2020 targets.

Cumulative impacts are challenging for a number of reasons:

1. There is a lack of certainty over the process of undertaking a CIA, with inconclusive guidance and inconsistent definition of scopes and what should be considered 'reasonably foreseeable'.
2. Uncertainty over project-level impacts, including bird collision and displacement, which are compounded by a number of projects potentially contributing to the same impact.
3. Very few definitive significance thresholds currently exist under which the cumulative impacts of projects can be managed.
4. There is potential for projects with larger environmental impacts to be consented before projects that may have lower environmental impacts, thus using up important environmental carrying capacities and potentially reducing the total capacity of projects that can gain consent. This is particularly difficult for project-level assessments to account for.

This document aims to tackle the first challenge above, seeking to provide a framework that develops a consistency of approach in areas prone to uncertainty; not so much providing guidance as setting an expectation of standards. In time, more formal guidance may need to be produced but was not considered possible at this present time. Instead the Guiding Principles (GP) aim to:

- ensure that all stakeholders have the same expectations of the CIA process;
- reduce uncertainty over the CIA process; and
- promote streamlining of the consenting process.

To assist in the delivery of these aims, this document has been endorsed by the Offshore Renewable Energy Licensing Group (ORELG) in its role of seeking to deliver initiatives that drive forward industry best practice and promote a consistent and comprehensive approach to assessing impacts in the marine environment. It is important to stress that this document does not seek to solve all CIA-related issues. Resolving issues around collision risk and displacement, and gaining a better understanding of thresholds, are separate but important areas that require further investigation to improve the process. We hope that other work streams being taken forward as part of the Joint Industry Projects and Marine Evidence and Data Group will help to improve understanding of these issues.
The project has been led by WSP and funded by NERC. The principles have been developed for project-level assessments in the UK offshore wind market, but may have wider relevance, including to future strategic environmental assessments (SEAs) (see section 1.3).

The principles have been developed collaboratively with regulators and stakeholders through:

- a steering group comprising of developers, The Crown Estate, DECC and Natural England;
- two workshops attended by around 40 representatives from regulators, stakeholders, academia and industry;
- two opportunities for written comments, with over 300 comments received;
- presentations at the Offshore Renewable Energy Licensing Group; and
- a number of bilateral meetings to discuss the draft guiding principles.

We would like to thank all who contributed to the report and in particular the steering group for their valued contribution.

Any comments or queries please contact martin.broderick@wspgroup.com or nick.medic@renewableuk.com.

1.1 A Meaningful Assessment

The focus of the principles is on producing meaningful assessments, which strike the right balance between pragmatism and precaution, and provide a meaningful analysis of the environmental impacts of any developments, while at the same time allowing development to proceed in a timely fashion.

The emphasis is on the assessment of potentially significant impacts,[2] rather than on comprehensively cataloguing every conceivable impact that might occur.

Following the work to develop the principles, we conclude that a meaningful assessment has to be based on:

- establishing and assessing risks;
- collaboration;
- a transparent uncertainty management process;
- clearly acknowledging the role of 'expert judgement' in the assessment of significance;
- sufficient data of an appropriate agreed quality;
- transparency of the CIA process in developers' assessment reports;
- clear and transparent guidance from both regulators and advisers;
- an agreed appropriate spatial and temporal resolution;
- a process involving periodic review and reassessment;
- methods that permit joint analysis of data and impacts from current, past and future projects, necessitating timely sharing of data and outputs;
- assessing the total/cumulative impacts on the environment/sensitive receptors, plus underlying trends;
- identifying all Reasonably Foreseeable Future Projects (RFFP) for which sufficient information is available;
- identifying limits of what is tolerable (e.g. ecological thresholds or headroom) and comparing the total/cumulative impacts against the limits of tolerability, using the precautionary principle; and
- using the resulting information as a sound basis for decision-making within acceptable timeframes.

The principles are structured to allow effective consideration of impacts from the additional changes caused by a proposed development in conjunction with other similar developments or as the combined impact of a set of developments taken together.
For the purposes of these Guiding Principles we define cumulative impacts as:

- those that result from additive impacts caused by other past, present or reasonably foreseeable actions together with the plan, programme or project itself and Synergistic Impacts (in-combination) that arise from the reaction between impacts of a development plan, programme or project on different aspects of the environment.[3]

2. R (on the application of Kent) v. First Secretary of State and Others [2004] EWHC 2953 (Admin).
3. Adapted from: Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (EC 1999).

1.2 EU Legislative Background

All proposals for projects that are subject to the European Environmental Impact Assessment (EIA) Directive (85/337/EEC) as amended by the Council Directives 97/11/EC, 2003/35/EC, 2009/31/EC and 2011/92/EU, must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project.

The Directive specifically refers to effects on human beings, fauna and flora, soil, water, air, climate, the landscape/seascape, material assets and cultural heritage, and the interactions between them. The Directive requires an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects at all stages of the project, and also of the measures envisaged for avoiding or mitigating significant adverse effects. Developers must ensure they consider both intra-project and inter-project cumulative effects. This Directive is implemented for OWFs (>100MW) in the UK through The Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2012 and The Electricity Works (Environmental Impact Assessment) (Scotland) Amendment Regulations 2008.

Separately, the EC Habitats Directive (92/43/EEC) (referred to as the Habitats Directive in this document) requires that where a plan or project is likely to have a significant effect on a Natura 2000 site (Special Areas of Conservation (SAC) designated under the Habitats Directive or Special Protection Areas (SPA) classified under the EC Birds Directive (2009/147/EC codified version)), either individually or in combination with other plans or projects, it shall be subject to Appropriate Assessment (AA) of its implications for the site in view of the site's conservation objectives. In accordance with the Directive, in-combination effects need to be considered for relevant Natura 2000 site features (habitats and species). The process of screening for likely significant effects and, where appropriate, the undertaking of an AA is known as a Habitats Regulations Assessment (HRA). These Directives are implemented in the UK through the Conservation of Habitats and Species Regulations 2010 and the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended), for projects outside 12 nautical miles.

The EIA and Habitats Directive regimes differ significantly in several key respects, and appreciating the differences is central to a proper understanding of the way the Habitats Directive operates and how its requirements relate in practice to the EIA process.[4]
The EIA and AA regimes are separate and both need to be complied with: EIA cannot substitute for AA, or vice versa. There is scope, however, for undertaking the processes in an integrated way.

The focal point of EIA is the ES, prepared by the developer. The decision-making body must then take into account the ES, along with certain other information, as part of its

4. PINS, Advice note ten: Habitat Regulations Assessment, Version 3, October 2012.

overall exercise of judgement as to whether to approve the project. But under the Habitats Directive, the AA is legally 'the competent authority's own assessment' of the material effects on site integrity, and must be undertaken on a precautionary basis. If a proposal fails the integrity test, it can only proceed in very restricted circumstances where Imperative Reasons of Overriding Public Interest (IROPI) are established, there are no alternatives and compensation has been agreed.[5] The developer therefore provides sufficient information within the ES and CIA, which the competent authority can use to undertake the AA.

Although acknowledging this crucial distinction, the Guiding Principles apply to both the EIA and HRA processes unless explicitly stated otherwise.

5. Stephen Tromans, Environmental Impact Assessment, 2012.

1.3 Strategic Environmental Assessment and Project-level Environmental Impact Assessment

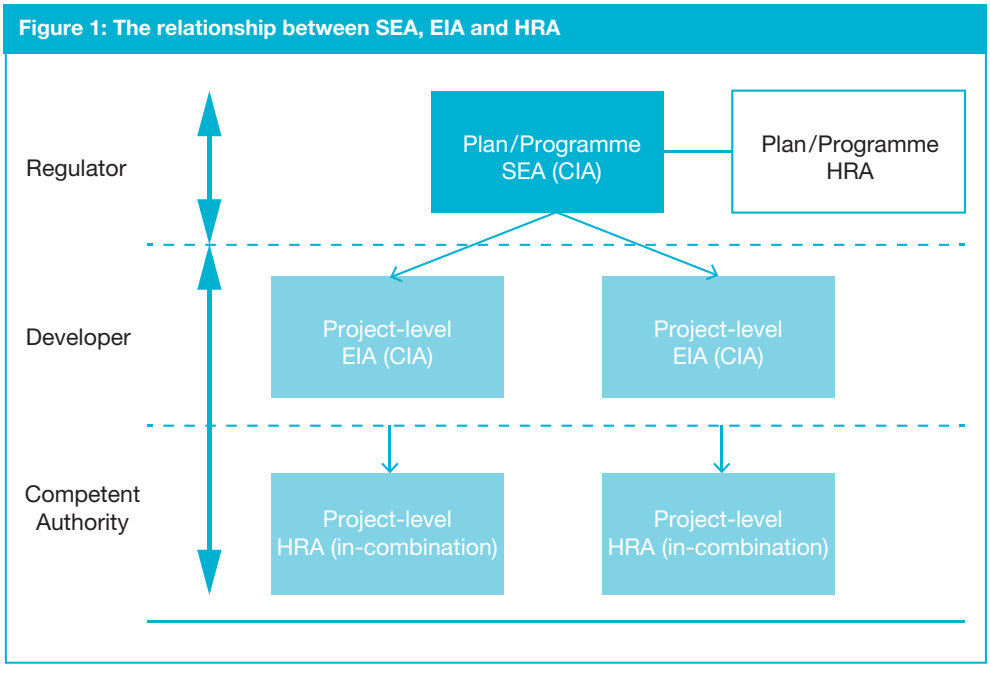
An important step in the overall assessment process is the Strategic Environmental Assessment (SEA), which, like the EIA, seeks to inform decision-making in regards to a particular action; however, the SEA does so at a strategic level (for plans, programmes and strategies) as opposed to the EIA, which focuses on individual projects. The SEA is therefore undertaken by the plan maker or regulator, while the developer undertakes the EIA.

The SEA is an important step for the assessment of cumulative impacts because, at a project level, many strategic decisions have already been made, with prior questions of whether, where and what type of development should take place either decided or largely pre-empted by earlier policy-making processes. The EIA's focus is on a project's direct impacts, which makes it difficult to address cumulative or in-combination, global and/or indirect impacts. The SEA should ideally strategically assess and define the total cumulative impact of the plan or programme and in particular assess whether that programme is likely to lead to any significant adverse impacts. This should help identify those sites most suitable for development and set the scene for the subsequent project-level EIAs. The SEA can also help to identify any key research requirements and appropriate mitigation and monitoring measures.

The relationship between SEA, EIA and HRA is summarised in the figure below.

It is important to note that the principles below are aimed at project-level assessments (be they part of the EIA or HRA). They may also be relevant for future strategic-level assessments, but that is not the primary purpose of the document.

Figure 1: The relationship between SEA, EIA and HRA



2.0 General Principles

1. CIA is a project-level assessment, carried out as part of a response to the requirements of the European EIA, Habitats and Wild Bird Directives, designed to identify potentially significant impacts of developments and possible mitigation and monitoring measures.

Rationale

CIA is not just undertaken as part of a regulatory requirement but is part of the wind industry's commitment to sustainable development. The purpose of an EIA (and the information provided to the competent authority to inform the HRA) is to inform the decision-making process in respect of a single project application. Cumulative impacts need to be considered to identify potentially significant impacts of the development in combination or cumulatively with other projects or activities. However, individual developers cannot be expected to undertake Strategic Environmental Assessments (SEAs) at the project level. Regulators need to undertake an SEA to identify thresholds at which impacts are likely to become significant, and in turn should help determine the focus of the individual project-level EIAs. SEAs can help to scope project-level CIAs, identify strategic research needs, and provide a clear steer on mitigation and monitoring requirements (GP11).

Implementation

- The purpose of an EIA and HRA is to inform the decision-making process in respect of a single project application. The EIA should be clear and practical so that it assists, not confuses, the decision-making process. Where an AA may be required, the EIA should contain the necessary information that the competent authority requires to carry out the AA (unless this is provided separately, e.g. a Report to Inform the AA or AA Signposting document).
- The CIA should cover the effects that result from additive and synergistic impacts, caused by reasonably foreseeable (see GP7) human use activities together with the project in question, in order to assist regulators and their advisers in ensuring that environmental capacity will not be exceeded.
- Strategic-level assessments, such as SEAs, can help identify additional research needs that are required to inform the CIA or project-level EIA and information requirements for the competent authority to carry out the AA (where required).

2. Developers, regulators and stakeholders will collaborate on the CIA.

Rationale

CIA is challenging, particularly with the current state of knowledge of the marine environment. It is to the mutual benefit of all to collaborate in identifying cumulative impacts of OWF developments. Collaboration on data collection and modelling, and agreement on strategic-level mitigation and monitoring measures can be more cost-effective and provide greater certainty in the CIA.

6. DEFRA Habitats Regulations, Evidence Plans for Nationally Significant Infrastructure Projects, 28 September 2012. The guidance establishes a non-statutory process whereby developers can opt to develop Evidence Plans to inform and guide HRAs for NSIPs. The guidance recognises the strong linkages that exist between the information required to inform EIAs and HRAs, and encourages developers to take account of these linkages in project planning.

Implementation

- Developers, consultees and regulators should proactively work together to identify and manage issues, and aim to resolve such issues as early as possible.[6] Where areas of disagreement occur, they should seek to define the disagreement as clearly as possible to facilitate mutual efforts to arrive at solutions.
- Seek early agreement of baseline data sets, assessment processes and pragmatic evidence-based thresholds. Evidence Plans can help to achieve this in England and Wales.
- Regular/periodic feedback of project development to stakeholders.
- Establish regional groups/working groups.
- Organisations should work to jointly identify needs for data collection, sharing and analysis, mitigation proposals and monitoring proposals (GP11).
- Organisations should identify and collaborate on key strategic needs and research projects that may not be able to be delivered by individual projects, e.g. Offshore Renewables Joint Industry Projects.
- Developers should cooperate with each other and with regulators and their statutory advisers in identifying and helping to deliver strategic (regional/national-scale) data collection programmes, i.e. developing data management plans that facilitate sharing of data and information across developments, e.g. the Firth of Forth and Tay Offshore Wind Farm Development Group and the Joint Cetacean Protocol.
- Identify the right stakeholders and ensure that the process is inclusive.
- Communicate CIA information in a manner appropriate to the audience, through explicit reference in non-technical summaries or, where appropriate, including the production of quantitative technical summaries as well as qualitative non-technical summaries.

3. Clear and transparent requirements for the CIA are to be provided by regulators and their advisers.

Rationale

Regulators and statutory consultees will ensure that their requirements from the industry are explicit, transparent and well founded, e.g. based on risk-management criteria. In turn, developers will ensure that assessments include clear audit trails so that the basis for judgements on impacts is transparent. Iterative engagement with Statutory Nature Conservation Bodies (SNCBs) and regulators, on the development process and timelines, can help ensure regulator input and resources are effectively deployed (GP9).

Implementation

- Developers should set a scope for the CIA and consult on it. SNCBs and regulators should provide transparent feedback based on the best available evidence.
- Clear audit trails should be provided in scoping documents, ES and information for AA documents (where required).
- Developers should work with advisers and regulators to keep them up to date on development timelines, including consultation periods. In England and Wales this may be done through Evidence Plans.[7]
- SNCBs and regulators should provide a clear, written rationale for requesting information or actions, and developers should provide a clear, written rationale for information provided.

7. DEFRA Habitats Regulations, Evidence Plans for Nationally Significant Infrastructure Projects, 28 September 2012.

2.1 Scoping Principles

4. Scoping principles: CIAs will include early, iterative and proportionate scoping.

Rationale

Scoping will be undertaken as early in the process as possible, leading to decisions on information requirements and their sources. Early scoping helps to focus on key impacts and makes the CIA process more efficient and proportionate. However, at this early stage there may not be enough information to scope issues effectively, and subsequent iterative reviews may need to be undertaken where appropriate.

Implementation

- Scoping should build on strategic-level assessments such as the SEA, Marine Plan Sustainability Appraisals, HRAs and zonal assessments where appropriate.
- Scoping should establish a source–pathway–receptor rationale.
- Developers in liaison with regulators and advisers will generate a comprehensive list of national and international plans, projects and regulated activities that have the potential to contribute to cumulative impacts of a project. The list below is intended to be comprehensive but not exhaustive. Adopting this approach allows developers to undertake an auditable process of screening out plans, projects and activities on a parameter-by-parameter basis (based on expert judgement and a source–pathway–receptor rationale), and minimises the risk of missing something that may later be raised in consultation or during the examination phase. The list is anticipated to comprise plans, projects and activities (both offshore and coastal) under the following topic areas:

  - aggregate extraction activity;
  - aquaculture;
  - coastal defences;
  - recreation;
  - coastal development;
  - commercial fishing activities;
  - linear infrastructure (cables and pipelines inclusive of outfalls, CCS);
  - oil & gas activity (existing, planned and licence blocks pending award, activities licensed under PON14 applications);
  - marine disposal activity;
  - capital and maintenance dredging;
  - shipping and navigation (routes, anchorage, etc.);
  - military sites and activities;
  - offshore wind farms (UK and international);
  - onshore or inshore wind farms (where appropriate); and
  - other energy generation (e.g. marine renewables).

- Projects are then scoped out where sufficient justification exists. Justification for scoping out projects should be clear and transparent.[8]
- Reviews will be undertaken, where required on the basis of new information, as changes to the project envelope occur or when improved approaches to assessment become available.
- The frequency and timing of scoping reviews, and any final cut-off dates after which no further reviews will be carried out, will be set by mutual agreement during the initial scoping

8. DCLG Planning Act 2008, Guidance on the Pre-application Process, January 2013.

It may not always be easy for applicants to assess potential impacts fully due to lack of available information. In such circumstances, applicants should take a pragmatic approach when determining what is feasible and reasonable. They should satisfy themselves that they have made all reasonable efforts to identify the main impacts and to include mitigation measures in their draft Order. There may be occasions when projects assessed for cumulative impacts will not ultimately be built – so only those identified through scoping opinion, or for which development consent has been granted or applied for, should reasonably be considered. As with the parameters for the Rochdale Envelope, applicants should fully explain their options to the Secretary of State as part of their application. National Policy Statements provide a useful overview of common impacts and ways of mitigating them.

phase. A final cut-off date is an important step that allows the applicant sufficient time to undertake the assessment, write the ES, consult on it, revise it and then apply. Given the size of ES and application documents, this process takes a considerable period of time, sometimes months. Additional significant changes may need to be considered through the use of addenda to the ES, but these should be used as little as possible.

- Once issues have been scoped out and agreed, there must be a strong justification for scoping them back in again. It is therefore envisaged that changes will be restricted to dealing with:

  – additional evidence, such as additional species and/or habitats found to be present on the site (e.g. from the interim results of evidence collected);
  – evidence, information or research that has emerged outside the EIA/HRA evidence processes, which would affect the information required and would need to be taken into account in the decision-making process (i.e. decisions must be based on the best available science); and
  – significant modifications to the developer's initial proposal that are likely to change the potential impacts of the proposal and therefore the evidence requirements to address these.[9]

5. Boundaries for spatial and temporal interactions for CIA work should be set in consultation with regulators, advisers and other key stakeholders, in line with best available data.

Rationale

Spatial boundaries should take account both of the relevant spatial scales for individual receptors (foraging distances, migratory routes) and the spatial extent of environmental changes introduced by developments, so that all potential impact pathways can be identified in line with the source–pathway–receptor model. Temporal boundaries should take account of the project life cycle (and duration of environmental changes introduced by the project at different phases of the life cycle) and the life cycles and recovery times of potentially affected receptors, and against reference populations. Assessing temporal changes in delivery is complex and can have substantial changes on the environmental impacts, e.g. the impact of three projects built concurrently over two years may have different impacts to three projects built without overlap over ten years.

Implementation

- Spatial extent of the CIA scope – geographical boundaries will be determined by:

  – the nature of the project;
  – the nature of the impacts, e.g. the population under consideration;
  – the sensitivity of the receptors;
  – the use of available data;
  – receptor interactions;
  – natural boundaries: and
  – potential source–pathway–receptor interactions.

- Spatial boundaries should be set on a receptor-specific basis, in discussion with the relevant agencies and regulators.
- The temporal scale of the CIA assessment should end at the lifetime of the applicant's project and consider the cumulative or in-combination impact of constructing, operating and decommissioning any reasonably foreseeable and current projects and activities within that timeframe. Temporal extent will be driven by the acceptance that it should be:

  – periodically reviewed;
  – interaction-specific;
  – specific to the project being assessed; and
  – specific to the receptors with significant impacts.

9. DEFRA Habitats Regulations, Evidence Plans for Nationally Significant Infrastructure Projects, 28 September 2012.

6. Developers will utilise a realistic Project Design Envelope.

Rationale

Project Design Envelopes are essential consenting tools. However, wide Project Design Envelopes can make the CIA assessment process more difficult through a multiplicity of 'worst-case' estimates giving rise to unrealistic project-level CIAs. Developers should bear in mind that the worst case may not provide the basis for a meaningful CIA, as the consenting envelope may be very different from the built development. Although there is a genuine need for flexibility, developers should accept that the larger the envelope the more challenging it is for other CIA assessments and the greater the potential cumulative impacts with wide envelopes using up vital environmental carrying capacities. This in turn may limit the overall growth of the sector. The use of realistic Project Design Envelope parameters is therefore encouraged.

Implementation

- Developers will utilise realistic Project Design Envelope parameters.
- Developers will provide transparent justification for the choice of parameters.
- Discussions should be held between regulators, stakeholders and developers over where wide Design Envelopes are likely to lead to an assessment of significant adverse impacts.
- When undertaking a CIA, developers and stakeholders should utilise as-built information where possible for projects, as opposed to the consented Project Design Envelope. Developers and regulators may also want to revisit carrying capacities for subsequent projects once construction plans have been agreed.

7. Developers will consider projects, plans and activities that have sufficient information available in order to undertake the assessment.[10]

Rationale

In scoping CIA work (GP4), developers and Statutory Consultees will include in the CIA process all Reasonably Foreseeable Future Projects (RFFP), in line with regulatory requirements. Broadly, RFFP are projects that are currently known to the planning system or already within the consenting process. However, the detail of which projects and human use activities should be included in a CIA will need to be discussed and agreed with regulators and their statutory advisers.

Applicants should use broad screening criteria to identify possible projects and human use activities for inclusion, and use the scoping process to focus on the most relevant projects (GP4).

For an assessment to be meaningful it has to be based on evidence. Where there is insufficient evidence this will necessarily preclude a meaningful quantitative assessment, as it is not appropriate for developers to make assumptions about the detail of future projects in such circumstances. However, applicants should make some attempt to address cumulative impacts (even if only qualitatively) even when information and data may be missing or sparse, or when it is difficult to analyse the impacts of future actions. When information is missing, sparse or unavailable, it is important to ensure that the situation and rationale for assessment conclusions are adequately documented. However, the focus of the assessment will therefore be on those project or activities for which sufficient relevant information exists.

10. Guiding Principle 7 only applies to a developer's EIA and not the competent authority's HRA.

Implementation

- In scoping cumulative impacts, reasonably foreseeable other major developments, plans and activities should be identified through consultation with the local planning authorities and other relevant authorities, on the basis of those that are:

  – under construction;
  – permitted applications, not yet under construction;
  – submitted applications, not yet determined;
  – those registered with PINS/Marine Scotland;
  – projects registered on the Scottish Executive Programme of Projects;
  – identified in the relevant Development Plan (and emerging Development Plans – with appropriate weight being given as they move closer to adoption), recognising that much information on any relevant proposals will be limited; and
  – identified in other plans and programmes (as appropriate) that set the framework for future development consents/approvals, where such development is reasonably likely to come forward.[11]

- In some circumstances, it may be appropriate to include plans and projects not yet submitted to a competent authority for consideration, but for which sufficient detail exists on which to make judgements of their effect on, for example, European sites. For example, an EIA may be being carried out and consulted on by a developer prior to an application being submitted.
- In the majority of cases it will not be possible to take into account new projects and plans that arise after the mutually agreed cut-off point, which may be a number of months before the application, in the CIA (GP4).
- Developers are only able to assess quantitatively those projects with a sufficient level of data, i.e. number of turbines, hub height, blade tip length, clearance above sea level, separation distances between turbines, cable route, landfall and scoping report. Projects without this level of detail cannot be assessed as comprehensively, and where information is lacking or sparse, developers' consideration of cumulative impacts will be necessarily at a lower resolution. It may not always be easy for developers to assess potential impacts fully due to lack of available information. In such circumstances, developers should take a pragmatic approach when determining what is feasible and reasonable.[12]

11. PINS, Advice note nine: Rochdale Envelope, Version 2, republished April 2012. See also supra note 7.

It may not always be easy for applicants to assess potential impacts fully due to lack of available information. In such circumstances, applicants should take a pragmatic approach when determining what is feasible and reasonable. They should satisfy themselves that they have made all reasonable efforts to identify the main impacts and to include mitigation measures in their draft Order. There may be occasions when projects assessed for cumulative impacts will not ultimately be built - so only those identified through scoping opinion, or for which development consent has been granted or applied for, should reasonably be considered. As with the parameters for the Rochdale Envelope, applicants should fully explain their options to the Secretary of State as part of their application. National Policy Statements provide a useful overview of common impacts and ways of mitigating them.

12. DCLG Planning Act 2008, Guidance on the Pre-application Process, January 2013.

2.2 Data Principles

8. The sharing and common analysis of compatible data will enhance the CIA process.

Rationale

CIA is made more difficult by the limited information that is available for the marine environment. The gathering and use of common data sets and common methodologies will enhance the CIA process by:

- reducing the potential for conflict between different user groups;
- potentially shortening timescales for assessment;
- helping to ensure that impacts upon sensitive receptors are identified;
- facilitating decisions on future locations;
- assisting regulators in comparing proposals; and
- facilitating mitigation and monitoring (GP11).

Ideally developers will share data, but experience from the previous Rounds shows that developers are often unwilling to share at an early stage. However, in some areas developers have been requested to produce a common analysis of data sets by regulators. This common analysis highlighted some potentially significant impacts and allowed the regulators to develop a coordinated response to better address CIA issues.

Implementation

- Developers will cooperate with each other and with regulators and their statutory advisers in the identification, implementation and reporting of strategic (regional/ national-scale) data collection programmes, i.e. developing data management plans that facilitate sharing of data and information across developments (e.g. the Firth of Forth and Tay Offshore Wind Farm Development Group).
- Develop agreed protocols for collecting and processing data to facilitate inter-comparison and data sharing (e.g. Joint Cetacean Protocol, Marine Environmental Data and Information Network: MEDIN).
- Have regard to best practice guidelines, such as CEFAS's data acquisition guidance.[13]
- Regulators, their advisers, developers and, where appropriate, The Crown Estate will work together to define strategic monitoring needs.
- Raw data from other projects can be preferable for CIAs rather than previously interpreted data, as this can reduce the number of embedded conservative assumptions within CIAs and help in standardising approaches across projects.

13. Centre for Environment, Fisheries and Aquaculture Science, Guidelines for Data Acquisition to Support Marine Environmental Assessments of Offshore Renewable Energy Projects (2012).

2.3 Assessment Principles

9. CIAs should be proportionate to the environmental risk of the projects and focused on key impacts and sensitive receptors.

Rationale

A key challenge in CIA is to keep the assessment reasonable and in proportion to the nature and scale of the development, and risk assessment has an important part to play in reaching agreement about the scope of the assessment (GP4). All stakeholders have to exercise their judgement about what is appropriate and proportionate and be able to justify the approach taken. It is always important to remember that the emphasis in both EIA and HRA is on identifying and assessing potentially significant impacts rather than on comprehensive cataloguing of every conceivable impact that might occur. Carefully thinking through the significant cumulative impacts that are likely to be generated by the development should allow a sensible decision to be reached at the scoping stage (GP4). CIA should be proportionate, focusing on key impacts and sensitive receptors, to ensure a holistic assessment of the environmental risks and impacts. Where uncertainty exists (GP10), there is merit in looking at these issues in more detail.

To meet the requirements of the Habitats and Wild Bird Directives, the information provided to support an HRA (where required) has to assess the impacts in relation to the conservation objectives for the specific features associated with relevant designated sites.[14,15]

Implementation

- Focus on the potentially significant impacts, using expert judgement.
- Consider whether full assessment is required (i.e. field-based data collection) or whether scientifically determined principles can be applied from past research, with additional supporting observations (GP4).
- Concern from stakeholder groups over what may occur will create demands for resources, and this may lead to allocation according to the degree of contention rather than real risk. Resources therefore need to be deployed proportionately and sensitively in order to allay stakeholder concerns regarding perceived risks.
- Upfront agreement, where possible, of suitable significance thresholds. Thresholds should be underpinned by sound science, but may be generated from an agreed ‘policy’ basis. In the absence of agreed thresholds, it may be necessary to undertake proactive funding of research by industry/government to better understand issues of uncertainty (see General Prinicple 10 below).
- Decision-makers will have regard to existing statutory policy, objectives and targets, e.g. National Policy Statements EN-1 and EN-3, designated sites, WFD, Marine Strategy Framework Directive (MSFD).

14. European Commission, Managing Natura 2000 Sites: The Provisions of Article 6 of the Habitats Directive 92/43/EEC, 2000.
15. European Commission, Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC, 2007.

10. Uncertainty should be addressed and where practicable quantified.

Rationale

Uncertainty (due to the absence of data or to natural variation) can make it difficult to be definitive about a potential impact, and it is crucial to define any uncertainty and seek to understand, minimise and communicate it. A 'precautionary but pragmatic' approach, based around the best available scientific evidence, will be used where baseline data or data about the environmental effect of a project are incomplete.

Scoping of CIAs (GP4) is likely to take the form of qualitative assessments to identify potentially significant impacts, taking care to identify the entire spectrum of possible local and wider impacts. However, the potentially significant impacts identified during scoping (GP4) need to be properly evaluated using a quantitative assessment tool where feasible (GP7).

To meet the requirements of the Habitats and Wild Bird Directives, the information provided to support an HRA (where required) has to establish the certainty of predicted impacts on the features for which relevant sites have been designated, in accordance with European guidance[16] and relevant case law, such as the Waddenzee judgment.[17]

Implementation

- Recognise and adequately quantify uncertainty where possible and particularly in all estimates used as a basis for assessment and in the outputs of statistical analyses.
- Data to be provided in formats that make clear the degree of confidence that can be placed on the data and potential margins of error, to best inform the decision-making process, e.g. sensitivity assessment.
- Quantify the probabilities of occurrence of all likely significant impacts using, where feasible, a quantitative assessment exercise.
- Monitor the significant environmental impacts of developments during construction and operation (GP11), and act on findings in both the existing project and any future developments.
- Plan and coordinate data collection and cumulative impacts assessments at a central level wherever possible.

16. Ibid.
17. Case C-127/02, Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v. Staatssecretaris van Landbouw, Natuurbeheer en Visserij, at http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:62002J0127:EN:HTML.

2.5 Mitigation and monitoring

11. Mitigation and monitoring plans should be informed by the results of the CIA.

Rationale

EIA Regulations[18] do not provide any clear requirements in relation to monitoring for the assessment of predicted impacts or for the implementation of mitigation measures, however, HRA Regulations do.[19]

Regulators have the power to impose mitigation measures as conditions within the consent for a project. These may also be documented in separate legal agreements between interested parties. CIA presents particular problems for the implementation of mitigation proposals in terms of spatial scale and the need for collaboration (GP2). The regional spatial nature of any mitigation proposals is an important consideration in implementing mitigation plans. Collaboration is therefore essential (GP2).

Developers also have a responsibility to monitor impacts of their developments; however, any wider monitoring proposals need to be considered in collaboration with regulators, stakeholders and other developers.

It is widely recognised that an effective assessment will involve some form of monitoring to assess the actual environmental outcomes that result from a development, and to provide a check on the quality of the predictions made within such assessments.
There is a need for improved coordination and strategic thinking on how best to monitor wider CIA impacts, which often occur on a regional scale.

It is important to understand there are two main forms of monitoring:

i Compliance monitoring in line with consent conditions (including efficacy of mitigation measures and environmental impacts) undertaken by the developer,[20] and
ii Monitoring/research of wider environmental impacts, which is not necessarily the responsibility of the developer and may be undertaken collaboratively with a range of parties (wider research).

Clear objectives for the monitoring programme are essential to ensure that appropriate monitoring is implemented. They should be appropriate and proportionate to the magnitude of observed impacts.

Implementation

- The vehicle for the delivery of mitigation and monitoring at the project level can be an Environmental Management Plan (EMP). The EMP will evolve during the course of a project. Pre-application, it is skeletal and very high level. After the consenting process it takes on more detail, and it is finally fleshed out with contractor method statements that address the requirements of the EMP, once contractors are appointed.

18. The Infrastructure Planning (Environmental Impact Assessment) (Amendment) Regulations 2012 (came into force 13 April 2012) and The Electricity Works (Environmental Impact Assessment) (Scotland) Amendment Regulations 2008.
19. Member States shall endeavour to encourage the management of features of the landscape that support the Natura 2000 network (Articles 3 and 10); undertake surveillance of habitats and species (Article 11); and ensure strict protection of species listed on Annex IV (Article 12 for animals and Article 13 for plants).
20. Case C-215/06, Commission of the European Communities v. Ireland (ECJ, 2008), implementation of the Directive must include effective enforcement procedures.

Conclusion

In 2002 the UK had 2 offshore wind turbines installed in the UK exclusive economic zone. By 2012 this number had grown to 973, with many projects in close proximity both to one another and to other onshore and offshore infrastructure. By 2020 this number of turbines is expected to increase significantly.

Clearly the combined effect of offshore wind farms and other projects, during construction and operation, needs to be pragmatically and meaningfully assessed in response to the requirements of EU legislation governing this area, notably European Environmental Impact Assessment (EIA) Directive 85/337/EEC and the EC Habitats Directive (92/43/EEC).

As the document states ‘cumulative impacts are challenging for a number of reasons’, primarily because of the lack of certainty over the process of undertaking a CIA; uncertainty over project level impacts; very few definitive significance thresholds; and because of the dynamics of project development. This document attempts to answer those challenges by offering 11 guiding principles for such assessments, explaining why and how they should be applied. It proceeds from a general principle reinforcing industry’s commitment to the highest standards of sustainable development and proceeds to look at principles as they relate to data, assessment, monitoring and mitigation.

As the document states ‘the focus of the principles is on producing meaningful assessments, which strike the right balance between pragmatism and precaution.’ This can achieved in a number of ways including collaboration and the provision of clear and transparent requirements (principles 2 and 3); the inclusion of early, iterative and proportionate scoping (principle 4); consulting on boundaries for spatial and temporal interactions, in line with best available data (principle 5); and utilising realistic Project Development Envelopes (principle 6). Further principles offer recommendations on project plans, data sharing, the proportionality to project risks, uncertainty and mitigation.

It is not a statutory document, whose principles have been tested in the courts, but a set of principles of best practice discussed by the industry and planning stakeholders, and aimed at those audiences.

Glossary

Adaptive Environmental Management – A continuous process of revising environmental management plans to take results to date into consideration. Objectives are set, actions to manage impacts are taken, monitoring and evaluation of the affected ecosystem and human responses are assessed, results are compared against expectations and future actions are adjusted, with each iteration of activity based on past experience. Such management is adaptive, because lessons learned are put in practice in the next cycle.

Appropriate Assessment – Under Article 6(3) of the Habitats Directive, an appropriate assessment is required where a plan or project is likely to have a significant effect upon a European site, either individually or in combination with other projects. Further to this, Article 6(4) states that where an appropriate assessment has been carried out and results in a negative assessment (in other words, the development will adversely affect the site(s) despite any proposed avoidance or mitigation measures or if uncertainty remains), consent will only be granted if there are no alternative solutions, there are Imperative Reasons of Overriding Public Interest (IROPI) for the development and compensatory measures have been secured.[21]

Baseline Characterisation – Work done to collect and interpret information on the condition/trends of the existing environment.

Compensation – The Habitats Directive seeks to create a coherent ecological network of protected sites. Therefore, if harm to one site is allowed – because there are no alternatives and IROPI can be shown – it must be compensated for, so that the coherence of the network as a whole is maintained. Compensatory measures can include, among other things:

- The recreation of a comparable habitat, which can in time be designated as a European site.
- The recreation of a comparable habitat as an extension to an existing European site.
- In exceptional circumstances, the classification of a new European site with comparable features.

Cumulative Impacts – Those that result from additive impacts caused by other past, present or reasonably foreseeable actions, together with the plan, programme or project itself and Synergistic Impacts (in-combination) that arise from the reaction between impacts of a development plan, programme or project on different aspects of the environment. Effect – Effects are defined as the consequences of impacts.[22]

Environmental Impact Assessment (EIA) – An assessment of the possible significant positive or negative impacts that the proposed development may have on the environment, together consisting of the natural, social and economic aspects as defined in the Town and Country Planning (Environmental Impact Assessment), England and Wales Regulations 2011 ('the 2011 TCPA Regulations') and the Infrastructure Planning (Environmental Impact Assessment) Regulations 2012.

Environmental Statement – In many but not all EIA regimes, the environmental information provided by a developer to the competent authority is presented in the form of an Environmental Statement. This is a document or documents containing the environmental information required under Article 5 of Directive 85/337/EEC as amended by Directive 97/11/EC.

21. PINS, Advice note ten: Habitat Regulations Assessment Relevant to Nationally Significant Infrastructure Projects, Version 3, republished October 2012.
22. Adapted from Guidelines for the Assessment of Indirect and Cumulative Impacts as well as Impact Interactions (EC 1999).

European Sites – Include special areas of conservation (SACs), special protection areas (SPAs), sites of community importance (SCIs) and candidate SACs. As a matter of government policy, potential SPAs and Ramsar sites are also treated as European sites.

Expert Judgement – Expert judgement is expression of opinion, based on knowledge and experience, which experts make in responding to problems.

Impact – The changes resulting from an action.

IROPI – Imperative Reason of Overriding Public Interest

Mitigation – Mitigation, in an environmental context, refers to a sequence of considerations designed to help manage adverse environmental impacts, which includes (in order of preference):

- Avoidance – avoiding the adverse environmental impact altogether;
- Minimisation – limiting the degree or magnitude of the adverse impact;
- Rectification – repairing, rehabilitating or restoring the impacted site as soon as possible;
- Reduction – gradually eliminating the adverse impact over time by preservation and maintenance operations during the life of the action; and
- Offsets – undertaking such activities that counterbalance an adverse, residual environmental impact.

Monitoring – An activity undertaken to provide specific information on the characteristics and functions of environmental and social variables in space and time. It is required in order to ensure:

- that impacts do not exceed the legal standards;
- the implementation of mitigation measures are checked in the manner described in the Environmental Statement; and
- the provision of early warning of potential environmental damages.

Offsetting – Measures taken to compensate for any residual significant, adverse impacts that cannot be avoided, minimised and/or rehabilitated or restored, in order to achieve no net loss or a net gain of biodiversity. Offsets can take the form of positive management interventions such as restoration of degraded habitat, arrested degradation or averted risk, and protecting areas where there is imminent or projected loss of biodiversity.

Precautionary Principle – This Is applied where there are threats of serious or irreversible environmental damage. The lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:

- careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
- an assessment of the risk-weighted consequences of various options.

Scoping – The process of identifying the content and extent of the environmental information to be submitted to the competent authority under the EIA procedure.

SEA – Strategic Environmental Assessment (SEA) is a systematic decision support process, aiming to ensure that environmental and possibly other sustainability aspects are considered effectively in policy, plan and programme making.[23]

23. Fischer, T. B.,Theory and Practice of Strategic Environmental Assessment, Earthscan, London, 2007.

Significance – Of an impact is determined by the sensitivity of the receiving environment, and the scale and size of the project. A small project in a very sensitive location may have a more ‘significant’ impact than a large project in a more robust location.

Threshold – The point after which an environment, organism, society or economy is clearly affected and degrades. Mitigation proposals from an assessment should prevent any impacts arising from a development from causing established thresholds to be reached or exceeded.

Uncertainty – The lack of certainty. A state of having limited knowledge where it is impossible to exactly describe the existing state, a future outcome or more than one possible outcome.

RenewableUK
Greencoat House, Francis Street
London SW1P 1DH, United Kingdom

Tel: +44 (0)20 7901 3000
Fax: +44 (0)20 7901 3001
Web: www.RenewableUK.com
Email: info@RenewableUK.com

Our vision is for renewable energy to play a leading role in powering the UK.

RenewableUK is the UK's leading renewable energy trade association, specialising in onshore wind, offshore wind, and wave & tidal energy. Formed in 1978, we have a large established corporate membership, ranging from small independent companies to large international corporations and manufacturers.

Acting as a central point of information and a united, representative voice for our membership, we conduct research, find solutions, organise events, facilitate business development, advocate and promote wind and marine renewables to government, industry, the media and the public.