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Guidelines providing a common understanding of the term 'environmental damage' as defined in Article 2 of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage

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1. Introduction

1. The purpose of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage¹ (the 'Environmental Liability Directive' or the 'Directive') is to establish a framework of environmental liability based on the polluter pays principle, to prevent and remedy environmental damage². An amendment adopted in 2019³ requires the European Commission to develop guidelines providing a common understanding of the term 'environmental damage' as defined in Article 2 of the Directive⁴. The present Notice sets out these guidelines.
2. In the scheme of the Directive, the term 'environmental damage' is pivotal. It is used to define the Directive's overall purpose⁵. When it occurs or when its occurrence is threatened, environmental damage triggers preventive or remedial action obligations for operators, as well as associated obligations for competent authorities⁶ – and entitles other persons to request action⁷. In the case of transboundary damage affecting more than one Member State, it triggers duties of co-operation between Member States⁸. In addition, the term carries consequences for financial operators who provide financial security to cover liabilities under the Directive⁹. The term thus plays a potentially major role in environmental protection – helping to determine whether or not environmental harm is prevented and remedied.
3. The present Guidelines for the common understanding of environmental damage address a need identified in an evaluation of the Directive carried out by the Commission in 2016 ('the evaluation').¹⁰ The evaluation concluded that the Directive's implementation was hampered by significant lack of uniform application of key concepts, in particular concepts related to environmental damage.¹¹ Hence, the Commission engaged a contractor to prepare, together with the Environmental Liability Directive ('ELD') government experts group and the relevant Commission service, a Common Understanding Document based on research and consultations¹². This groundwork, although it resulted in neither a Commission document nor a document agreed with the Member States, has nevertheless helped to prepare the way for these Guidelines.

¹ OJ L 143, 30.4.2004, p. 56

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02004L0035-20190626&qid=1568193390794&from=EN>

² Article 1

³ The Directive has been amended four times, by, respectively, Directive 2006/21/EC, OJ L 102, 11.4.2006, p. 15, Directive 2009/31/EC, OJ L 140, 5.6.2009, p. 114, Directive 2013/30/EU, OJ L 178, 28.6.2013, p. 66, and Regulation (EU) 2019/1010, OJ L 170, 25.6.2019, p. 115.

⁴ The effect of the amendment is to insert into Article 18(3) of the Directive, the following text: 'By 31 December 2020, the Commission shall develop guidelines providing a common understanding of the term 'environmental damage' as defined in Article 2.'

⁵ See Article 2.

⁶ See in particular Articles 5, 6 and 11 of the Directive.

⁷ Article 12 of the Directive. The right extends to 'preventive action' where a Member State did not decide in its national transposition of the Directive to avail of the possibility given in Article 12(5) to not apply that right to cases of imminent threat of damage.

⁸ Article 15(1) and 15(2) of the Directive.

⁹ Article 14 of the Directive.

¹⁰ REFIT Evaluation of the Environmental Liability Directive, SWD(2016) 121 final

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2016:121:FIN>

¹¹ REFIT Evaluation, page 60

¹² Common Understanding Document - ELD key terms and concepts. Specific Contract No 07.0203/2016/745366/SER/ENV.E4

<https://circabc.europa.eu/ui/group/cafdbfbb-a3b9-42d8-b3c9-05e8f2c6a6fe/library/3112f0b5-0021-49ce-9dfc-9127a1e12a8b/details>

4. Against this background, the Guidelines consider all aspects of the definition of 'environmental damage'. The term is content-rich, referring to or embedding several other terms and concepts. The Guidelines encompass these, since they are necessary to the term's understanding. In terms of structure, the Guidelines begin by looking at the legal and wider regulatory context in which the definition is relevant. They then look in turn at the definition of 'damage' and the complete text of the definition of 'environmental damage', before examining in detail the three separate categories of environmental damage comprised in it, i.e. 'damage to protected species and natural habitats', 'water damage' and 'land damage'. Overall conclusions are presented at the end.
5. Given that the objective of the Guidelines is to provide a common understanding of the definition, their content is analytical and detailed. While they are not exclusively intended for any specific readership, they are envisaged as being of use to the following in particular, all of whom have roles under the Directive: Member States, competent authorities, operators, natural and legal persons, and providers of financial security. The Guidelines seek to address as comprehensively as possible the difficulties of understanding that have already arisen or that might reasonably be expected to arise in the future. They do so by closely analysing all parts of the definition of 'environmental damage', drawing attention to detailed considerations that can be inferred from the wording and the legal and regulatory context, and referring to case-law of the Court of Justice of the European Union ('the CJEU' or 'the Court') which can help clarify different aspects of the definition either directly or by analogy.
6. The Guidelines have been prepared under the exclusive responsibility of the Commission. However, only the Court is competent to authoritatively interpret Union law.

2. The legal and wider regulatory context

7. The Environmental Liability Directive is a general, cross-cutting environmental instrument, applying not to one environmental subject-area alone but to several. As such, it complements other Union environmental instruments that aim to protect the environment. The definition of 'environmental damage' expressly refers to four of these: Council Directive 79/409/EEC on the conservation of wild birds¹³ [*now Directive 2009/147/EC on the conservation of wild birds*¹⁴] ('the Birds Directive'); Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora¹⁵ ('the Habitats Directive'); Directive 2000/60/EC of the European Parliament and the Council establishing a framework for Community action in the field of water policy¹⁶ ('the Water Framework Directive'); and Directive 2008/56/EC establishing a framework for Community action in the field of marine environmental policy¹⁷ ('the

¹³ OJ L 103, 25.4.1979, p. 1

¹⁴ OJ L 20, 26.1.2010, p. 7

¹⁵ OJ L 206, 22.7.92, p. 7

¹⁶ OJ L 32, 22.12.2000, p. 1

¹⁷ OJ L 164, 25.6.2008, p. 19

Marine Strategy Framework Directive'). Cross-references to, and an understanding of, legal provisions of these other instruments are necessary to an understanding of 'environmental damage'.

8. The Environmental Liability Directive is based on, and is an expression of, the polluter pays principle¹⁸. In addition, a common understanding of 'environmental damage' needs to draw on other principles on which Union environmental policy is founded, namely the precautionary principle¹⁹, and the principles that preventive action should be taken and that environmental damage should as a priority be rectified at source²⁰, these being relevant to its interpretation.
9. The Environmental Liability Directive addresses adverse effects on the environment arising from occupational activities. These activities are mostly regulated separately under other Union environmental laws²¹. The laws concerned create a wider regulatory context which is relevant to the application of the Directive's obligations concerning environmental damage. This is because the provisions of those laws regularly aim also to prevent or limit many of the same adverse effects encompassed by the term 'environmental damage'.

Liability for environmental damage

10. 'Environmental damage' needs to be understood in terms of those who may be legally liable for it under the Directive, the circumstances in which and the conditions under which their liability may arise, and the kinds of action that liability will require them to take.
11. Those who may be legally liable are referred to as 'operators'²². They are only liable in respect of 'occupational activities' coming within the scope of the Directive²³. In Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein eV*, the Court stated that the concept of 'occupational activity' is not limited solely to activities which are market-related or are competitive in nature, but encompasses all activities carried out in an occupational context, as opposed to a purely personal or domestic context, and, therefore, cover also activities carried out in the public interest pursuant to a statutory assignment of tasks²⁴. In the specific case, it confirmed that the Directive applied to a public body responsible for drainage of a wetland in the interests of agriculture.
12. The main relevant occupational activities²⁵ are those described in Annex III of the Directive. Operators of these may be liable for all categories of environmental damage. Moreover, the liability of operators covered by Annex III is strict, i.e. it is not dependent

¹⁸ See in particular Article 1 of the Directive

¹⁹ See Case C-129/16 *Türkevei Tejtermelő Kft* and Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein eV* where the Court expressly mentions the precautionary principle – at paragraph 52 of the former and at paragraph 31 of the latter.

²⁰ Article 191(2) of the Treaty on the Functioning of the European Union.

²¹ Of particular relevance are the instruments referred to in Annex III, or the instruments that have succeeded them where these have been replaced.

²² Defined in Article 2(6) of the Directive.

²³ Defined in Article 2(7) of the Directive. See also Article 3(1) of the Directive.

²⁴ Paragraph 76 of the judgment.

²⁵ See Article 3(1)(a) of the Directive.

on their having acted or omitted action on the basis of fault (intent or negligence). For strict liability it is sufficient that a causal link is established between the environmental damage and the occupational activity. The eighth recital of the Directive sets out the rationale for bringing the occupational activities described in Annex III within its scope. It states that the Directive should apply to occupational activities which present a risk to human health and the environment, adding: *'Those activities should be identified, in principle, by reference to the relevant [Union] legislation which provides for regulatory requirements in relation to certain activities or practices considered as posing a potential or actual risk for human health or the environment'*.

- 13.** The operational activities in Annex III are defined by reference to other pieces of Union environmental legislation many of which have been codified, amended or replaced since the Directive was adopted. However, the occupational activities in question continue to come within the scope of the Directive. The Common Understanding Document provided information on how the legislation concerned evolved²⁶. The occupational activities in Annex III cover, amongst other things, the operation of many industrial activities, including bigger or riskier industrial installations such as chemical factories; waste management operations; certain polluting discharges to water; water abstraction and impoundment; the manufacture, use, storage, processing, filling, release into the environment and onsite transport of certain substances, preparations and products, as well as transport of dangerous substances or goods by road, rail, inland waterways, sea or air.
- 14.** For one category of 'environmental damage', namely damage to protected species and natural habitats, operators of occupational activities other than those listed in Annex III may also be liable where they are at fault or negligent²⁷. The ninth recital of the Directive explains the rationale for extending the range of occupational activities covered.
- 15.** Under other applicable Union environmental legislation, operators are often required to hold, and respect the conditions of an authorisation; or they may be bound to operate in accordance with general binding requirements. It cannot be excluded, however, that some operators will carry out occupational activities without the required authorisation, or without respecting all the applicable rules. This may be the case, for example, with persons who carry out illegal waste operations. Such illegal conduct does not take such operators outside the scope of the Directive. Were it to do so, the result would be inconsistent with the polluter pays principle – of which the Directive is an expression. The Directive needs to be interpreted in the light of the polluter pays principle²⁸. Further support for coverage of illegal operators is provided by Case C-494/01, *Commission v Ireland*, in which the Court found that a failure to respect inspection requirements linked to permit requirements could arise in respect of waste operations carried out without any permit²⁹. By analogy, it can be argued that liability requirements under the Directive can

²⁶ See chapter 2.9 in the Common Understanding Document on 'Legislation referred to in Annex III', p. 41 – 43.

²⁷ Article 3(1)(b) of the Directive

²⁸ See, by analogy, Case C-15/19, *AMA*, paragraph 54.

²⁹ Paragraphs 190-194

similarly apply in respect of occupational activities carried out in disregard of authorisation or other regulatory requirements.

16. In Cases C-378/08, *Raffinerie Mediterranee (ERG) SpA and others*, and C-534/13, *Fipa Group and others*, the Court ruled that the environmental liability mechanism provided for by the Directive requires the establishment of a causal link between the activity of one or more identifiable operators and the environmental damage or the imminent threat of such damage³⁰. As for the causal link, the Court has ruled that, if the legislation of a Member State so provides, a presumption, based on plausible evidence, is sufficient in order to establish a causal link.³¹
17. The Directive does not define what occurrences will give rise to a causal link between the operational activity and the environmental damage or imminent threat. At a number of places in the text of the Directive, there are references to 'an emission, event or incident'.³² However, with the exception of 'emission'³³, these terms are not defined, and, as Case C-529/15, *Folk*³⁴ and Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein eV* show, the Directive covers the consequences of the normal operation of an Annex III occupational activity. In Case C-529/15, the normal operation involved a hydro-electric power-station; in case C-297/19, maintenance of drainage in a wetland. Liability should therefore not only be assumed to arise in respect of one-off accidents or incidents. For ease of reference, the present Guidelines will refer to the range of possible occurrences as 'damaging occurrences'.
18. The nature of the factors causing adverse effects – what can be referred to as the 'damage factors'³⁵ – may also vary³⁶. Their nature may be additive – involving the deposit of waste on land, or use of inert materials to fill in a wetland, for instance, or the contamination of the receiving environment by pollutants. Or it may be subtractive or extractive – involving an impedance of river flow, for instance³⁷, or the removal of trees or minerals. Or it may be purely destructive – as where land features are cleared or individuals of a protected species killed.
19. The manifestation of adverse effects may be 'sudden and accidental' – as through an explosion in a chemical factory resulting in fire, destruction of buildings and pollution of land and water through toxic substances or fire-fighting substances entering into water – or immediate – as where a protected woodland habitat is lost through a rapid

³⁰ Paragraph 54

³¹ See Case C-378/08, *Raffinerie Mediterranee (ERG) SpA and others*, in which the Court stated: *Directive 2004/35 does not preclude national legislation which allows the competent authority acting within the framework of the directive to operate on the presumption, also in cases involving diffuse pollution, that there is a causal link between operators and the pollution found on account of the fact that the operators' installations are located close to the polluted area. However, in accordance with the 'polluter pays' principle, in order for such a causal link thus to be presumed, that authority must have plausible evidence capable of justifying its presumption, such as the fact that the operator's installation is located close to the pollution found and that there is a correlation between the pollutants identified and the substances used by the operator in connection with his activities.*

³² See for example Article 17

³³ See Article 2(8) of the Directive.

³⁴ Paragraph 33

³⁵ See use of the expression Article 6(1)(a) of the Directive.

³⁶ For land damage, however, the damage factors are limited to direct or indirect introduction, in, on or under land of substances, preparations, organisms or micro-organisms.

³⁷ See the circumstances that featured in Case C-527/15, *Folk*

logging operation. Or it may be gradual – as where a leak from a ruptured pipe leads to cumulative harm in the receiving environment, when detected only after some time. It is also possible that adverse effects from the same damaging occurrence may manifest themselves in both ways – as where a sudden and accidental release of a large quantity of toxic substances into a river results in an immediate fish-kill before causing a slower and more gradual deterioration of the structures of a protected aquatic habitat.

20. Likewise, knowledge of both damaging occurrences and the adverse effects they cause may come to light at different times. If the damaging occurrence is a major accident, it will become known at once, but an unknown incident may not come to light for some time – for example, a rupture in an underground storage tank containing dangerous substances.³⁸

21. The Directive provides for three main categories of obligation on operators:

- First of all, where environmental damage has not yet occurred but there is an imminent threat of such damage occurring, operators are required to take the necessary preventive measures without delay³⁹;
- Secondly, where environmental damage has occurred, operators are required to take *'all practicable steps to immediately control, contain, remove or otherwise manage the relevant contaminants and/or any other damage factors in order to limit or prevent further environmental damage and adverse effects on human health or further impairment of services'*⁴⁰. For ease of reference, the present Guidelines will refer to these steps as *'immediate management of damage factors'*;
- Thirdly, where environmental damage has occurred, operators are required to take remedial measures⁴¹. They are to identify the appropriate remedial measures in accordance with Annex II of the Directive, and submit them for approval to the competent authority⁴².

22. The references to *'without delay'* and *'immediately'* show that the first two categories of obligation are time-critical. This has implications for the common understanding of the term environmental damage. The operator's duties to take preventive measures and to immediately manage damage factors under the Directive exist in parallel to similar obligations under other Union environmental legislation, for example Directive 2010/75/EU of the European Parliament and the Council on industrial emissions (integrated pollution prevention and control)⁴³ (the Industrial Emissions Directive').

23. Operators must also fulfil certain ancillary obligations. For example, where environmental damage has occurred, they must *'without delay, inform the competent authority of all relevant aspects of the situation'*⁴⁴ and may be required to provide

³⁸ See also Annex VI.1. of the Directive, referring to *'date of occurrence and/or discovery of the damage'*.

³⁹ Article 5(1) of the Directive

⁴⁰ Article 6(1)(a) of the Directive

⁴¹ Article 6(1)(b) of the Directive

⁴² Article 7(1) of the Directive.

⁴³ OJ L 334, 17.12.10, p. 17

⁴⁴ Article 6(1) of the Directive.

supplementary information.⁴⁵ They may be required to fulfil similar information obligations in respect of an imminent threat of environmental damage.⁴⁶ They may also be required to carry out their own assessment with regard to environmental damage and to supply any information and data necessary to the competent authority⁴⁷. Looking beyond the Environmental Liability Directive, operators may be required to provide relevant information to the authorities under other Union environmental legislation, for example the Industrial Emissions Directive⁴⁸ or the Seveso Directive⁴⁹.

24. The Environmental Liability Directive contains provisions on its temporal applicability, setting limits on its application by reference to the date of 30 April 2007 and the passage of a period of thirty years⁵⁰. The temporal scope for the specific parts introduced by its amendments is of course a different one, for example for damage to marine waters the Directive is applicable as of 19 July 2015.⁵¹ It is important to note that occupational activities governed by authorisations that pre-date 30 April 2007 are covered for liability purposes if and to the extent that the damaging activity is continuing after the 30 April 2007. In Case C-529/15, *Folk*, the Court held that the Directive '*applies ratione temporis to the environmental damage that occurred after 30 April 2007 but which was caused by the operation of a facility authorised in accordance with the law governing matters relating to water and put into operation before that date.*'⁵²

25. The Directive also contains provisions on exceptions, setting limits on its application by reference to a number of specified causes of environmental damage⁵³. Furthermore, it provides for a number of grounds that an operator can invoke to avoid bearing the cost of preventive and remedial actions⁵⁴. It also gives Member States the possibility to decide to relieve an operator of the cost of remedial actions, where the operator demonstrates that he was not at fault or negligent and fulfilled all conditions of an authorisation⁵⁵ or acted according to the state of the technical and scientific art.⁵⁶ However, there are limits to the last-mentioned possibilities, as is made clear by the Court judgment in Case C-525/15, *Folk*⁵⁷ concerning Article 8(4)(a) of the Directive.

26. The Directive allows Member States to maintain or adopt more stringent provisions in relation to environmental damage⁵⁸. This is in line with Article 193 of the Treaty on the

⁴⁵ Article 6(2)(a) of the Directive.

⁴⁶ Article 5(2) and 5(3) of the Directive.

⁴⁷ Article 11(2), second sentence of the Directive.

⁴⁸ See Article 7 and 8 of the Industrial Emissions Directive.

⁴⁹ Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC, OJ L 197, 24.7.2012, p. 1

⁵⁰ Article 17 of the Directive.

⁵¹ Article 38(2) of Directive 2013/30/EU on safety of offshore oil and gas operations and amending Directive 2004/35/EC, OJ L 178, 28.6.2013, p. 66

⁵² See also Case C-378/08, *ERG*

⁵³ Article 4 of the Directive.

⁵⁴ Article 8(3) of the Directive.

⁵⁵ Article 8(4)(a) of the Directive – often referred to as 'permit defence'.

⁵⁶ Article 8(4)(b) of the Directive – often referred to as 'development defence'.

⁵⁷ The Court found that the Directive '*must be interpreted as precluding a provision of national law which excludes, generally and automatically, that damage which has a significant adverse effect on the ecological, chemical or quantitative status or ecological potential of the water in question be categorised as 'environmental damage', due to the mere fact that it is covered by an authorisation granted under that law.*'

⁵⁸ Article 16 of the Directive. See Case C-129/16 for an example.

Functioning of the European Union (TFEU). However, the entitlement to have more stringent provisions is not the same as an entitlement to have *different* provisions, which do not fulfil the Directive's requirements; nor is it an entitlement to set aside the liability of operators for 'environmental damage' under the Directive. The requirements of the Directive must, as a minimum, be fulfilled in all respects.

The role of the competent authorities and relevant wider roles of Member States

27. While the operator is liable for environmental damage, competent authorities⁵⁹ have important duties in relation to it. A common understanding of the term 'environmental damage' therefore requires some reference to the role of competent authorities.
28. Competent authorities must establish the operator who has caused environmental damage or the imminent threat of damage⁶⁰. By implication, the competent authorities must know about the existence of the environmental damage or the threat; otherwise the duty of establishing the operator has no meaning.
29. Competent authorities must also assess the significance of the environmental damage⁶¹. Once again, the duty of assessing significance only makes sense if the authorities know about the existence of the damage or the threat.
30. Competent authorities must also determine the remedial measures to be taken by the operator under Annex II of the Directive,⁶² on the basis of the identification of the potential remedial measures by the operator and with the cooperation of the relevant operator, as required. In Case C-379/08, *Raffinerie Mediterranee (ERG) SpA and others*, the Court affirms the scope for competent authorities to alter the remedial measures, while also pointing to the need to give the operator an opportunity to be heard⁶³.
31. The duties to establish the operator, to assess the significance of environmental damage and to determine the remedial measures require the competent authorities to have and to apply relevant information about the damaging occurrence, the underlying activity, the environmental damage and the causal link between them, as well as the operator carrying out the activity.
32. As noted at paragraph 23 above, operators have duties under the Directive to inform the competent authorities about damaging occurrences and related environmental damage. As also noted, operators may also have separate duties to provide information about damaging occurrences to competent authorities under other Union environmental legislation. It cannot be excluded, however, that some operators will fail to report to the competent authorities. Damaging occurrences and environmental damage causally linked to clandestine illegal activities or illegal or negligent acts or omissions within authorised activities, for example, are unlikely or less likely to be reported.

⁵⁹ Designated under Article 11(1) of the Directive.

⁶⁰ Article 11(2) of the Directive.

⁶¹ *Ibid.*

⁶² Article 7(2) and Article 11(2) of the Directive

⁶³ See paragraphs 47 to 67.

- 33.** Recital 15 of the Directive indicates that public authorities should ensure the proper implementation and enforcement of the scheme provided for by the Directive, and the Directive contains provisions according to which the competent authorities may require more information and an increased level of engagement from the operator⁶⁴. It is nevertheless important that competent authorities have recourse to sources of information other than that provided by the operator under the Directive.
- 34.** One potential source of information on damaging occurrences and environmental damage consists in requests for action made by the natural or legal persons entitled to make such requests.⁶⁵ Requests for action are required to be '*accompanied by the relevant information and data supporting the observations submitted in relation to the environmental damage in question*'.⁶⁶
- 35.** Another possible source consists in the results of regulatory oversight under other applicable Union environmental legislation. An example would be routine inspections of industrial facilities under the Industrial Emissions Directive⁶⁷. While, for purposes of liability, not all damaging occurrences will coincide with regulatory infringements by an operator, regulatory infringements make damaging occurrences more likely. This is because the regulatory requirements concerned are aimed at controlling the potential or actual risks to human health and the environment associated with the occupational activities concerned. As a consequence, compliance with them should, in practice, reduce the likelihood that damaging occurrences will arise. By the same token, non-compliance with these requirements – including serious flouting of them – makes it more likely that damaging occurrences will arise. Provided that there are good systems for sharing information, monitoring of compliance with regulatory requirements should therefore help competent authorities under the Directive to know about environmental damage or the imminent threat of damage, establish the operator and characterise the damaging occurrence. It may also assist competent authorities in the assessment of environmental damage, furnishing information about the nature of polluting emissions, for example.
- 36.** As will be clear from later sections of the present Guidelines, the assessment of the significance of environmental damage generally requires information about the state of the receiving environment. Some state-of-the-environment information will be directly linked to the damaging occurrence – for example, records of fish mortality in a river recently adversely affected by a polluting emission. But other relevant state-of-the-environment information will consist of records and information gathered for other purposes – to determine the general conservation status of a protected species, for instance, or the condition of a protected nature site. Much relevant state-of-the-environment information will derive from state-of-the-environment monitoring carried out by national administrations. Of particular relevance will be information gathered and collated under the four directives mentioned in paragraph 7 above. This may be supplemented by other relevant information – for example, an environmental non-

⁶⁴ See, for example, Article 5(3), 5(4), 6(2) and 6(3) of the Directive.

⁶⁵ Article 12(1) of the Directive.

⁶⁶ Article 12(2) of the Directive.

⁶⁷ See Article 23 of the Industrial Emissions Directive.

governmental organisation (NGO) may provide extensive information through citizen science⁶⁸.

- 37.** Closely related in potential importance to state-of-the-environment information is scientific and technical information on the subject-matter of the environmental damage – for example, scientific knowledge about the life cycle of a protected species affected, or about the human health risks of exposure to certain contaminants.
- 38.** As observed above, the occurrence of environmental damage or its imminent threat will often (although not always, as has already been noted) coincide with a regulatory infringement. Such infringements may require or warrant separate action by Member State authorities, to secure the results required by other Union legislation (for example, the protection of nature sites under Union nature legislation), and to implement sanctions that are effective, proportionate and dissuasive. Thus, the same factual circumstances may give rise to both environmental liability and liability to sanctions, and in practice assessment of environmental damage under the Directive may take place in parallel with the assessment of breaches for other purposes. For example, conduct that Member States are required to criminalise under Directive 2008/99/EC on the protection of the environment through criminal law ('the Environmental Crime Directive')⁶⁹ includes conduct likely to give rise to environmental liability.⁷⁰ In this context, in order to assess the significance of environmental damage, competent authorities may find themselves drawing on the same information sources as those authorities responsible for sanctions. It is to be stressed, however, that application of liability requirements under the Directive is separate to the application of sanctions. In this regard, the fact that authorities may be taking action to impose administrative or criminal sanctions is *not* a reason to set aside the duties that competent authorities have to ensure that environmental damage is assessed and prevented, damage factors immediately managed or damage remediated in accordance with the Directive (the reverse is also true: the pursuit of environmental liability is not a reason to disregard the role of sanctions).⁷¹
- 39.** A number of further points arise with regard to situations where liability under the Directive coincides with regulatory breaches under other relevant Union environmental legislation, in particular the other legislation referred to in the Directive itself. Firstly, if damage factors are not being controlled in accordance with the Directive or other legislation, the principle of effectiveness will require Member States and their authorities to act to ensure compliance with the relevant provisions of the Directive and the other legislation that are being contravened. Secondly, although the Directive does not explicitly provide for secondary liability for public authorities to take preventive measures, measures to immediately manage damage factors, and remedial measures, nor does it provide that all of these measures can be dispensed with if the operator fails to

⁶⁸ In all Member States, ornithological NGOs play a very important role in collecting and collating records of bird distribution, for instance. The value of this information has been recognised by the Court of Justice, see Case C-3/96, *Commission v Netherlands*, paragraphs 68 to 70.

⁶⁹ OJ L 328, 6.12.2008, p. 91

⁷⁰ See Article 3 of Directive 2008/99/EC

⁷¹ For example, the eleventh recital of the Environmental Crime Directive states that it is without prejudice to other systems of liability for environmental damage under [Union] law or national law.

adopt them, or if the operator can justify not having to bear their cost,⁷² the distinction that the Directive draws between the measures and the costs of those measures indicates that the measures are required irrespective of whether the operator can or should bear the cost⁷³. Thirdly, case-law shows how a Member State may be required to take further steps if a required result is not achieved despite the authorities having taken action against an operator. In Case C-104/15, *Commission v Romania*, which concerned the Extractive Waste Directive⁷⁴, the Court found that the Member State remained liable for failure to control toxic dust emissions from a mining waste facility, notwithstanding the fact that it had imposed sanctions on the operator⁷⁵ and that the operator had become insolvent⁷⁶.

3. 'Damage'

40. The definition of 'environmental damage' incorporates the term 'damage', which is separately defined. The term 'damage' is not self-standing (in the sense that the obligations of the Directive do not apply at the level of generality found in it). When it comes to applying the Directive to concrete situations, it is necessary to rely on the more precise formulations contained in the definition of 'environmental damage'. This reservation notwithstanding, the definition of 'damage' is important not only because it is embedded in the definition of 'environmental damage' but because it presents four basic concepts which are refined in the more elaborate definition. The Guidelines therefore address 'damage' before addressing other elements of the definition of 'environmental damage'.

Box 1: Definition of 'damage'

Article 2(2) of the Environmental Liability Directive provides that 'damage' means '*measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly.*'

41. The four basic concepts found in the definition of 'damage' are:

- the *material scope* of what is affected, i.e. natural resources and natural resource services;
- the concept of *adverse effects*, i.e. adverse changes and impairments;
- the *scope* of these adverse effects, i.e. measurable ones;
- the *ways* in which these adverse effects can occur, i.e. directly or indirectly.

⁷² See Article 8

⁷³ See again Article 8.

⁷⁴ Directive 2006/21/EC

⁷⁵ See paragraph 96 of the judgment.

⁷⁶ See paragraph 99 of the judgment.

Material scope of natural resources and natural resource services

Box 2: Definitions of 'natural resource' and 'natural resource service'

Article 2(12) of the Environmental Liability Directive provides that 'natural resource' means *'protected species and natural habitats, water and land.'*

Article 12(13) of the Environmental Liability Directive provides that 'services' and 'natural resource services' mean *'the functions performed by a natural resource for the benefit of another natural resource or the public.'*

42. With regard to material scope, the definition of 'damage' refers to two concepts which are themselves also expressly defined in the Directive, namely 'natural resource' and 'natural resource service'. 'Natural resource' is defined to mean three separate resource categories: protected species and natural habitats; water; and land. At the same time, the definition of 'natural resource service' highlights the inter-dependencies of these different categories by referring to the functions they perform for each other. The following are some non-exhaustive examples: a salt marsh (a type of natural habitat) may protect coastal land; surface water (a category of water) may support protected species of wild bird; land may filter out pollutants which might otherwise reach groundwater (a category of water). The definition of 'natural resource service' also refers to natural resource functions which benefit people. By way of non-exhaustive examples, some natural habitats – peatlands notably - serve as important carbon stores; some waters are a source of drinking water and some provide fish for recreational fishing; and land is necessary for food production and habitation.

Adverse effects

43. With regard to adverse effects, the definition of 'damage' relates, firstly, to an 'adverse change' to a natural resource and, secondly, to 'impairment' of a natural resource service. More precision is found in the definition of 'environmental damage', but it is useful to keep in mind three general considerations:

- Both 'adverse change' and 'impairment' connote adverse effects;
- These adverse effects concern both the state of a natural resource *and* the beneficial functions performed by the natural resource for both other natural resources and people. Adverse effects therefore include not only adverse effects on the properties of a natural resource but also adverse effects on the interdependencies and dynamic relationships within and between natural resources and services – as referred to in paragraph 42 above on the functions that natural resources provide to each other as well as the public;
- The notions of change and impairment imply a difference between the situation 'before' and the situation 'after' a damaging occurrence.

Measurable

44. For the definition of 'damage' to apply, adverse changes and impairment must be 'measurable'. Measurable means that damage needs to be capable of precise

quantification or estimation, and that the situation *before* and the situation *after* a damaging occurrence must be capable of being meaningfully compared.

Directly or indirectly

45. Finally, the definition of 'damage' allows for the possibility that adverse changes or impairments may occur both directly and indirectly. 'Directly or indirectly' concerns the causal link between a damaging occurrence, on the one hand, and specific adverse effects, on the other. Sometimes the causal link will be direct, as where an operator's act of deforestation destroys a natural woodland habitat. Sometimes it will be indirect, as where nutrient discharges to a water body lead to the deterioration of a distant protected aquatic habitat. For the chain of cause and effect, it is useful to refer to a source-pathway-receptor model. Damage factors associated with an occupational activity (i.e. source), may be communicated through air, water or land (i.e. pathway) before affecting a specific natural resource (i.e. receptor). In Case C-129/16, *Túrkevei Tejtermelő Kft.*, the Court noted that, while air pollution as such does not constitute environmental damage, damage to natural resources may arise through air-borne elements⁷⁷. A damaging occurrence may be separated from the adverse effects it causes in terms of time (e.g. the natural resource suffers a delayed reaction) or space (e.g. the natural resource suffers adverse effects at a location which is distant from where the damaging occurrence arose) or in terms of the natural resources involved (e.g. an act consisting of applying a toxic substance to land causes the death of a protected species). The notion that adverse effects can occur indirectly is also related to the functions that natural resources provide for each other.

4. Overview of 'environmental damage'

46. The definition of 'environmental damage' incorporates and refines the definition of 'damage'. First of all, with regard to material and geographical scope, it disaggregates and compartmentalises the three categories of 'natural resource' that feature in the definition of 'damage', i.e. protected species and natural habitats; water; and land. Furthermore, for the first two natural resource categories, it includes certain details that help to determine the geographical scope of obligations under the Directive. Secondly, within each of the natural resource categories, relevant adverse effects are described in more detail by reference to certain concepts (which these Guidelines call 'reference concepts'). Thirdly, a notion of significance is included to further define the scope of the adverse effects that need to be addressed. A fourth point to note is that the definition of environmental damage does not preclude the possibility that all three sub-categories of natural resource damage will be relevant at the same time.

Box 3: Definition of 'environmental damage'

Article 2(1) of the Environmental Liability Directive⁷⁸ provides that 'environmental damage' means:

'(a) damage to protected species and natural habitats, which is any damage that has

⁷⁷ See paragraphs 40-46.

⁷⁸ The text here is a consolidated one, reflecting the addition of marine waters after the original adoption of the Directive.

significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species. The significance of such effects is to be assessed with reference to the baseline condition, taking account of the criteria set out in Annex I;

Damage to protected species and natural habitats does not include previously identified adverse effects which result from an act by an operator which was expressly authorised by the relevant authorities in accordance with provisions implementing Article 6(3) and (4) or Article 16 of Directive 92/43/EEC or Article 9 of Directive 79/409/EEC or, in the case of habitats and species not covered by Community law, in accordance with equivalent provisions of national law on nature conservation.

(b) water damage, which is any damage that significantly adversely affects:

- (i) the ecological, chemical or quantitative status or the ecological potential, as defined in Directive 2000/60/EC, of the waters concerned, with the exception of adverse effects where Article 4(7) of that Directive applies; or*
- (ii) the environmental status of the marine waters concerned, as defined in Directive 2008/56/EC, in so far as particular aspects of the environmental status of the marine environment are not already addressed through Directive 2000/60/EC.⁷⁹*

(c) land damage, which is any land contamination that creates a significant risk of human health being adversely affected as a result of the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms.'

Material and geographical scope of each natural resource

47. Because of the degree of compartmentalisation of the material scope, a common understanding of 'environmental damage' requires a close analysis of each category of natural resource. This includes the geographical scope of each resource category. Commentary on material and geographical scope is provided in the next sections of these Guidelines.

Reference concepts for adverse effects

48. For all three categories of natural resource, the definition of 'environmental damage' uses a reference concept to determine whether adverse effects are relevant. For protected species and natural habitats, the reference concept is the favourable conservation status of these species and habitats. For water, it is the ecological, chemical or quantitative status or the ecological potential of waters under the Water Framework Directive and the environmental status of marine waters under the Marine Strategy Framework Directive, which have different dimensions. For land, it is risks to human health. The function of these reference concepts is to provide parameters and criteria against which the relevance of adverse effects can be

⁷⁹ Inserted by Directive 2013/30/EU 2019/1010, OJ L 170, 25.6.2019, p. 115

examined. The concepts provide elements in respect of which adverse effects are to be measured. The concepts are analysed in more detail in the sections of these Guidelines devoted to the specific categories of natural resource damage.

The assessment of significance

49. The reference concepts qualify the kinds of adverse effects that are covered by the Directive. The definition of 'environmental damage' contains a further qualification: the words 'significant' or 'significantly' figure in relation to each natural resource category, and the Directive requires preventive measures, immediate management of damage factors or remedial measures only if the adverse effects are assessed as significant in terms of the reference concepts mentioned.

50. Amongst Union environmental law instruments, a requirement to assess significance is not unique to the Environmental Liability Directive. Such a requirement also features in the Habitats Directive⁸⁰, for instance, and it is at the heart of Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the 'Environmental Impact Assessment Directive'). Assessment of significance pursuant to the Environmental Liability Directive is, however, *sui generis*.

51. In the context of the Environmental Liability Directive, a common understanding of the assessment of significance can benefit from a consideration of the following:

- The circumstances in which the need for assessment of significance arises;
- The purposes of assessment of significance;
- Legal responsibilities with regard to carrying out of the assessment;
- The context or contexts in which the assessment is to be carried out;
- The focus of the assessment;
- The carrying out of the assessment;
- The determination of significance.

Circumstances

52. As section 2 of these Guidelines indicates, damaging occurrences, damage factors, relevant occupational activities, operator conduct, and the nature of the causal link may all vary considerably. The assessment of significance will need to be adaptable to all of these variables. For instance, a one-off accident will present a different set of challenges to an ongoing operation such as that featuring in Case C-529/15, *Folk*.

Purposes

53. The assessment of significance of adverse effects is not an end in itself. It is for the purposes of determining whether adverse effects require:

- preventive measures;
- immediate management of damage factors, and/or
- remedial measures.

⁸⁰ Article 6(3) of the Habitats Directive.

54. These three purposes are distinguishable, and, depending on the circumstances, some may be relevant and others not. For example, in situations of imminent threat, the sole purpose of the assessment will be to prevent a damaging occurrence from taking place. In situations where a damaging occurrence has already taken place, it may or may not be necessary to immediately manage the damage factors. For example, such immediate management may no longer be possible where the damage factors have already created adverse effects and are exhausted. The assessment of significance will, therefore, need to be adapted to the purposes which are relevant to the specific circumstances that have arisen.
55. The purposes of prevention and immediate management of damage factors relate to potential or actual damage factors. These purposes reflect the Treaty principles of prevention and rectification at source. As previously noted, they are time-critical.
56. The purpose of identifying a need for remedial measures is closely related to the Directive's specific requirements on remedial measures, which are described in detail in Annex II. In the case of damage to protected species and natural habitats, and water damage, remedial measures are aimed at restoring the environment to its baseline condition (see Box 4 below) by way of primary, complementary and compensatory remediation, all of which terms are defined. As can be seen, these requirements focus on the environment that has been adversely affected, rather than on the damage factors – although further management of damage factors cannot be excluded, as the *Folk* case indicates⁸¹. In the case of land damage, remedial measures are aimed at further management of damage factors, if such factors remain a significant risk to human health even after fulfilment of the second purpose mentioned above.

Box 4: Definition of 'baseline condition'

Article 2(14) of the Environmental Liability Directive provides that 'baseline condition' means *'the condition at the time of the damage of the natural resources and services that would have existed had the environmental damage not occurred, estimated on the basis of the best information available.'*

Legal responsibilities

57. As indicated in paragraph 29, the competent authority is responsible for the assessment of significance. Recital 24 of the Directive states: *'Competent authorities should be in charge of specific tasks entailing appropriate administrative discretion, namely the duty to assess the significance of the damage and to determine which remedial measures should be taken'*.
58. It must be borne in mind, however, that operators bear the responsibility to prevent damaging occurrences without delay and to immediately manage damage factors. These responsibilities imply a need for operators to independently recognise damage factors linked to their operational activities and to proactively respond to them. Furthermore,

⁸¹ The *Folk* case raised an issue of whether the functioning of a hydro-electric power-station could give rise to liability under the Directive.

relevant provisions of the Directive indicate that the assessment of significance should take place against the backdrop of a dynamic relationship between the operator and the competent authority, with the former required to actively provide information and respect instructions given by the competent authority⁸². These can include an instruction to the operator to carry out his own assessment and to supply any information and data necessary⁸³. This dynamic relationship is especially important where adverse effects have already occurred and it is necessary to take remedial measures,

59. The assessment of significance may take place in situations where there are parties concerned other than the competent authority and the operator. In particular, the competent authority has to fulfil several legal duties in respect of a valid request for action⁸⁴.
60. Where environmental damage affects or is likely to affect several Member States, the Member States concerned have duties to co-operate which are relevant to the assessment of significance⁸⁵.

Context

61. The categories of natural resource that are relevant and the corresponding reference concepts will determine the elements to be assessed. For example, damage to protected species and natural habitats will require quite different elements to be considered compared to land damage. These specific elements are considered in more detail in the next sections of these Guidelines.

Focus of the assessment

62. The focus of the assessment will need to vary according to the relevant circumstances, purposes and context.
63. The definition of 'damage' shows that adverse effects comprise changes and impairments that need to be measurable, and the definition of 'environmental damage' shows that these changes and impairments need to relate to the reference concepts.
64. Measurement involves comparing the condition of natural resources *before* the damaging occurrence took place with their condition *after* the occurrence took place (obviously, so far as the condition *after* is concerned, this comparison will be notional in the case of an imminent threat, since the imminent threat will not yet have materialised). The comparison involves *two* distinct forms of precise quantification or estimation, one focused on the situation before and the other on the situation after the damaging occurrence took place⁸⁶. It is important to stress that, although relevant to both preventive and remedial action, assessment will need to be treated differently depending on whether the action is time-critical. Where time-critical, the assessment will need to

⁸² Articles 5 and 6 of the Directive.

⁸³ Article 11(2), second sentence of the Directive.

⁸⁴ Article 12 of the Directive.

⁸⁵ Article 15 of the Directive.

⁸⁶ More precisely for the purpose of complementary and compensatory remediation : the condition which would have existed had the environmental damage not occurred – taking account of interim developments to the better or to the worse of the damaged resources, estimated on the basis of the best information available on existing trends at the time of the damage.

be done on the basis of rapid judgment drawing on existing and immediately accessible information – often of a general character. Support for such a differentiated approach can be found in Case C-378/08, *Raffinerie Mediterranee (ERG) SpA and others*.⁸⁷

65. With regard to measurement of the situation before, the concept of the baseline condition comes into play (see Box 4 above). While it may often be assumed that the baseline condition is constant, it is possible that the condition may fluctuate regularly or predictably (as with a flood-plain or a seasonal lake such as a turlough, for instance⁸⁸), or that the area of habitat or population of a species affected may already be increasing or decreasing.
66. As for the change or impairment, this will consist of the difference between the current situation of the natural resource and the baseline condition. The current situation must also, therefore, be known.
67. The gap between the baseline condition and the current situation may be an unstable one, as where the damage factors are continuing to generate adverse effects, and the magnitude of these adverse effects is growing. From the purpose of immediately managing the damage factors, it can be inferred that an assessment of significance will also need to address the damage factors causing the adverse effects.

The carrying out of the assessment

68. Depending on which purposes are relevant to the circumstances that present themselves, the assessment of significance may involve different stages and a consideration of different types of information.
69. Where preventive measures are required in respect of an imminent threat, the operator – and, as necessary, the competent authority – will need to recognise the potential damage factors associated with the occupational activity, and without delay ensure that these do not cause significant adverse effects to the relevant natural resources.
70. Likewise, where damage factors require immediate management, the operator – and, as necessary, the competent authority – will need to recognise the damage factors associated with the occupational activity, and ensure rapid interventions to manage these so as to stop the chain of causation of significant adverse effects on the relevant natural resources.
71. For purposes of preventive measures and immediate management of damage factors, the need for rapid assessment means that reliance will need to be placed on and conclusions reached on the basis of readily available information. General information about the nature of the damage factors and the exposure of a natural resource to their adverse effects will often be key, since there may be no time to wait for site-specific details to emerge.

⁸⁷ See paragraph 52.

⁸⁸ A priority habitat type under the Habitats Directive.

72. Where remedial measures are required, a more in-depth assessment is appropriate, and this should be less time-critical. It should, nevertheless, be timely, as time is also a relevant factor with respect to the remedial measures described in Annex II⁸⁹.
73. Where remedial measures in particular are concerned, it cannot be excluded that, as paragraph 20 shows, there will be a time-lag between the damaging occurrence and the first opportunity to assess its significance. Subject to the Directive's provisions on temporal scope (as mentioned in paragraph 24 above), the existence of a time-lag is not, however, a reason to refrain from assessment, particularly where the damaging occurrence has had enduring adverse effects.
74. The circumstances giving rise to possible liability under the Directive may also require assessment to address a regulatory failure in respect of another environmental instrument, such as the Environmental Impact Assessment Directive or the Habitats Directive⁹⁰. Assessment of significance under the Environmental Liability Directive should not, however, be conflated with – or made subject to – forms of assessment required to address a regulatory failure.

Determination of significance

75. Significance needs to be determined in the light of the purposes that require fulfilment. Having regard to the definition of 'baseline condition', it needs to be determined in relation to the actual physical area of land or water or (in the case of protected species) actual populations adversely affected or at risk of being affected, taking account of any pre-existing intrinsic characteristics or dynamic factors that may have been influencing the natural resources concerned independently of the damaging occurrence.
76. As regards 'significant', in Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein eV*, the Court stated: '*It follows from the use of the adjective 'significant' in the first subparagraph of Article 2(1)(a) of Directive 2004/35 that only damage of a certain seriousness, classified as 'significant damage' in Annex I to that directive, can be regarded as damage to protected species and natural habitats, which means that it is necessary in each specific case to assess the importance of the effects of the damage concerned.*'⁹¹ The importance of effects does not necessarily depend on their being present on a large scale⁹². The concept of what is 'significant' is related to the notion of measurable adverse changes and impairments as found in the definition of 'damage'.
77. With regard to the purpose of ensuring preventive measures, significance will relate to the avoidance of damage factors causing adverse effects on specific areas or populations. The same is true of the purpose of ensuring immediate management of

⁸⁹ The longer it takes to put in place primary remediation, the greater will be the need for compensatory remediation.

⁹⁰ See Case C-411/17, at paragraphs 175 and 176.

⁹¹ Paragraph 34.

⁹² In Case C-396/96, *Commission v Ireland*, the Court noted in relation to the Environmental Impact Assessment Directive, that '*Even a small-scale project can have significant effects on the environment if it is in a location where the environmental factors set out in Article 3 of the Directive, such as fauna and flora, soil, water, climate or cultural heritage, are sensitive to the slightest alteration.*' The same reasoning can be considered applicable in the context of the Environmental Liability Directive.

damage factors. The adverse effects will be those referred to in paragraphs 80 and 81 below. The determination should turn on whether the damage factors are likely to result in some or all of these adverse effects arising.

- 78.** The Directive is, amongst other things, subject to interpretation in the light of the precautionary principle⁹³ (see also paragraph 8 above). Under the precautionary principle, scientific certainty that measurable adverse effects will arise is not required. A reasonable belief is sufficient. Furthermore, if the operator or the competent authority decides *not* to take or require preventive measures or an immediate management of damage factors, its decision should be on the basis that there is no reasonable scientific doubt that inaction will cause adverse effects to a natural resource⁹⁴.
- 79.** If there is a determination of significance for purposes of preventive measures and immediate management of damage factors, the question arises as to what preventive measures and damage-factor management will be necessary and appropriate. The measures and management should be aimed at stopping or breaking any chain of causation arising from the damage factors which could result in – or has already resulted in – the natural resource experiencing adverse effects of the kind mentioned in paragraphs 80 and 81 below. The *Folk* case shows that an existing authorisation in respect of the damage factors will not necessarily exempt the operator from the need to intervene. To the extent that the Directive allows reliance to be placed on an existing authorisation, relevant conditions must be fulfilled. Furthermore, a lack of fulfilment of relevant authorisation or other regulatory requirements is, of itself, likely to be a strong indication of the need to apply preventive measures and measures to manage damage factors under the Environmental Liability Directive. This is because it is likely to demonstrate that relevant damage factors have not been placed under the degree of control that fulfilment of regulatory requirements would ensure and are therefore more susceptible to cause adverse effects that come within the scope of the Directive.
- 80.** With regard to the purpose of identifying a need for remedial measures, the provisions of Annex II on damage to protected species and natural habitats, and water damage indicate how a determination of significance should be made in respect of these natural resources. The following all need to be considered in the light of the relevant reference concepts: measurable permanent loss of an area, part of an area, population or part of a population⁹⁵; measurable deterioration of an area, part of an area, or life conditions of a population or part of a population, which is, however, capable of being restored⁹⁶; measurable loss of services provided by the areas or populations affected⁹⁷; and the measurable time-gap that would arise before the baseline condition could be restored if

⁹³ See Article 191(2) of the Treaty on the Functioning of the European Union (TFEU).

⁹⁴ This is consistent with the reasoning of the Court in Case C-127/02, *Waddenzee*. In that case, the Court established a strict test for assessing plans or projects for purposes of Article 6(3) of the Habitats Directive. It considered that an authority can allow a plan or project only if it has made certain that it will not adversely affect site integrity, adding that *'that is the case where no reasonable scientific doubt remains as to the absence of such effects.'* The time-pressure to take preventive measures and immediately manage damage factors under the Environmental Liability Directive is an important differentiating circumstance, and means that an operator or competent authority may have limited information at their disposal. However, the precautionary principle means that any doubts should result in preventive measures and immediate management of damage factors being taken rather than result in inaction.

⁹⁵ This would correspond to the concept of complementary remediation

⁹⁶ This would correspond to the concept of primary remediation.

⁹⁷ Services feature in the definitions of primary, complementary and compensatory remediation.

restoration is possible⁹⁸. The adverse effects will be significant if there is a measurable loss or deterioration in respect of an area or population, or a measurable loss of the services that these provide.

- 81.** So far as land damage is concerned, the provisions of Annex II indicate that the following should at least be considered: the presence, type and concentration of relevant contaminants, their risks and the possibility of their dispersion; the characteristics and function of the soil; and the current and approved future use of the contaminated land. The risk to human health will be significant if, in the specific local environment, there is a measurable change in the level of direct or indirect harmful exposure of human beings to contaminants that can be causally linked to an Annex III operational activity. Indirect exposure may arise if the contaminated land provides services to other natural resources, for example if it filters pollutants that may reach water, or if there is dispersion of contaminants via the soil, air or water.

Combinations of different categories of environmental damage

- 82.** The fact that the definition of 'environmental damage' comprises three distinct sub-categories of natural resource damage does not mean that all categories need to feature in the adverse effects in order for liability to arise. Liability can arise where there is only one category of environmental damage. By the same token, where environmental damage features more than one category, all the categories concerned need to be addressed. The Directive does not give a discretion to limit its application to certain ones.

5. 'Damage to protected species and natural habitats'

- 83.** The definition of 'damage to protected species and natural habitats' is closely linked to provisions of the Birds Directive and the Habitats Directive. These directives are collectively referred to in these Guidelines as the 'nature directives'. In particular, the Environmental Liability Directive and the nature directives share several common concepts. As the fifth recital of the Environmental Liability Directive indicates, when a concept derives from other relevant Union legislation, the same definition should be used so that common criteria can be used and uniform application promoted. At the same time, account needs to be taken of a number of differences of coverage between the nature directives on the one hand and the Environmental Liability Directive on the other.

- 84.** The Guidelines draw attention to the following in particular:

- the material and geographical scope of the protected species and natural habitats concerned;
- the reference concept for adverse effects, i.e. favourable conservation status;
- the assessment of significance;
- exclusions.

⁹⁸ This would correspond to the concept of compensatory remediation.

Material and geographical scope of protected species and natural habitats

Box 5: Definition of 'protected species and natural habitats'

Article 2(3) of the Environmental Liability Directive provides that 'protected species and natural habitats' means:

'(a) the species mentioned in Article 4(2) of Directive 79/409/EEC or listed in Annex I thereto or listed in Annexes II and IV to Directive 92/43/EEC;

(b) the habitats of species mentioned in Article 4(2) of Directive 79/409/EEC or listed in Annex I thereto or listed in Annex II to Directive 92/43/EEC, and the natural habitats listed in Annex I to Directive 92/43/EEC and the breeding sites or resting places of the species listed in Annex IV to Directive 92/43/EEC; and

(c) where a Member State so determines, any habitat or species, not listed in those Annexes which the Member State designates for equivalent purposes as those laid down in these two Directives.'

85. 'Protected species' cover, firstly, certain species protected under the nature directives, and, secondly, any additional species that a Member State decides to include for liability purposes. The second species' category is at the discretion of Member States. More than half of the Member States have done so. With regard to the first category of species, there is *not* a perfect overlap between species covered by the nature directives on the one hand and the Environmental Liability Directive on the other.

86. So far as bird species are concerned, the species covered by the definition presented in Box 5 above are those referred to in Article 4(2) or listed in Annex I of the Birds Directive. Article 4(2) of the Birds Directive refers to regularly occurring migratory species, and Annex I of the Birds Directive lists certain other bird species. Taken together, these represent a *sub-set* of the European avifauna⁹⁹. The Environmental Liability Directive does *not* apply to bird species which are absent from Annex I of the Birds Directive and which are not regularly occurring migratory species – unless they are added by a Member State.

87. With regard to non-bird species, the definition covers animal and plant species listed in Annexes II and IV of the Habitats Directive. It does *not* directly cover certain species which are *only* listed in Annex V of the Habitats Directive¹⁰⁰ – unless Member States specifically add them, or unless they represent typical species of a natural habitat listed in Annex I of the Habitats Directive¹⁰¹.

⁹⁹ The list of bird species that are covered by Article 1 of the Birds Directive (bird species naturally occurring in the wild state in the European Territory of the Member States to which the Treaty applies) is available here: https://ec.europa.eu/environment/nature/conservation/wildbirds/eu_species/index_en.htm; See also the “[Checklist for bird species](#)” (last updated: 05.07.2018) available at http://cdr.eionet.europa.eu/help/birds_art12

¹⁰⁰ See Annex II of the guidance document on species protection under the Habitats Directive, available here: https://ec.europa.eu/environment/nature/conservation/species/guidance/pdf/guidance_en.pdf

¹⁰¹ For information on typical species see page 74 of the document “Reporting under Article 17 of the Habitats Directive - Explanatory Notes and Guidelines for the period 2013–2018” called “[Reporting guidelines Article 17 \(pdf\) Addendum](#) (last updated:05.07.2018)” at http://cdr.eionet.europa.eu/help/habitats_art17

- 88.** As with species, Member States may designate natural habitats that are additional to those linked to the nature directives.
- 89.** The habitats listed in Annex I of the Habitats Directive will, in particular, be found in Natura 2000 sites identified for these habitats. However, the Environmental Liability Directive is not limited in its application to natural habitats found in Natura 2000. Under article 17 of the Habitats Directive, Member States report 'distribution maps' of Annex I habitats, which cover their entire territory¹⁰². It is to be noted that natural habitats are comprised of different elements, including typical species, which are described in the Habitats Manual¹⁰³.
- 90.** The habitats of regularly occurring migratory bird species and of bird species listed in Annex I of the Birds Directive will, in particular, include those found in special protection areas (SPAs) classified under Article 4 of the Birds Directive. However, while SPAs are likely to comprise the most important habitats, the wording of the Environmental Liability Directive does not restrict application of damage to natural habitats to bird species' habitats within SPAs. There is no obligation under the nature directives for Member States to report on the location of the habitats of these birds species outside of the SPAs.
- 91.** The habitats of species listed in Annex II to the Habitats Directive will, in particular, be found in Natura 2000 sites identified for these species. However, the Environmental Liability Directive is not limited in its application to natural habitats found in Natura 2000. Under article 17 of the Habitats Directive, Member States report 'distribution maps' of Annex II species, which cover their entire territory¹⁰⁴.
- 92.** With regard to the breeding and resting places of species listed in Annex IV of the Habitats Directive, the Commission has developed guidance which can be of assistance in identifying these¹⁰⁵. However, there is no obligation under the nature directives for Member States to report on their location.
- 93.** As regards geographical scope, some protected species, for example cetaceans, and some natural habitats, for example reefs, are found off-shore. The Environmental Liability Directive applies to these in respect of the following: internal waters and the territorial sea; the exclusive economic zone (EEZ) and/or to other areas where Member States are exercising equivalent sovereign rights; and, for species and habitats on or depending on the sea-bed, for example sea-turtles, the continental shelf¹⁰⁶. The Habitats Directive applies to protected species beyond these areas in relation to the activities of fishing vessels flying a Member State flag: by extension, so does the Environmental Liability Directive.

¹⁰² See p. 164 of the document "Reporting under Article 17 of the Habitats Directive - Explanatory Notes and Guidelines for the period 2013–2018" called "Reporting guidelines Article 17 (pdf) Addendum (last updated:05.07.2018)" at http://cdr.eionet.europa.eu/help/habitats_art17.

¹⁰³ see https://ec.europa.eu/environment/nature/legislation/habitatsdirective/docs/Int_Manual_EU28.pdf

¹⁰⁴ See p. 121 of the document "Reporting under Article 17 of the Habitats Directive - Explanatory Notes and Guidelines for the period 2013–2018", called *Addendum (last updated:05.07.2018)* at http://cdr.eionet.europa.eu/help/habitats_art17

¹⁰⁵ https://ec.europa.eu/environment/nature/conservation/species/guidance/pdf/guidance_en.pdf, under revision

¹⁰⁶ See Guidelines for the establishment of the Natura 2000 network in the marine environment, Application of the Habitats and Birds Directive, pages 18-25

Reference concept for adverse effects

94. The reference concept for adverse effects on protected species and natural habitats, 'favourable conservation status', is expressly defined in both the Environmental Liability Directive and the Habitats Directive¹⁰⁷ and the definitions are similar.

Box 6: Definition of 'favourable conservation status' in the Environmental Liability Directive

Article 2(4) of the Environmental Liability Directive provides that 'conservation status' means:

'(a) in respect of a natural habitat, the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within, as the case may be, the European territory of the Member States to which the Treaty applies or the territory of a Member State or the natural range of that habitat;

The conservation status of a natural habitat will be taken as 'favourable' when:

- its natural range and areas it covers within that range are stable or increasing,*
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and*
- the conservation status of its typical species is favourable, as defined in (b);*

(b) in respect of a species, the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within, as the case may be, the European territory of the Member States to which the Treaty applies or the territory of a Member State or the natural range of that species;

The conservation status of a species will be taken as 'favourable' when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats,*
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and*
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.'*

95. The reference to the 'sum' of influences in the definition presented in Box 6 indicates that different individual influences contribute to the overall conservation-status outcomes mentioned. Influences may be positive or negative, and create their effects directly or indirectly. The damaging occurrences that cause environmental damage will count amongst but not represent the entire sum of influences.

¹⁰⁷ Article 1(e) and (i) in Habitats Directive.

- 96.** The definition of 'conservation status' refers to a number of parameters when describing the conservation-status outcomes of the sum of influences. In the case of natural habitats, these parameters comprise the long-term natural distribution, structure and functions as well as the long-term survival of the typical species of the habitat within, as the case may be, the European territory of the Member States to which the Treaty applies or the territory of a Member State or the natural range of that habitat. In the case of a species, the parameters consist of the long-term distribution and abundance of its populations within, as the case may be, the European territory of the Member States to which the Treaty applies or the territory of a Member State or the natural range of that species.
- 97.** The above-mentioned parameters are further qualified in the precise descriptions of what constitutes 'favourable' conservation status. For example, in relation to natural habitats, the qualification corresponding to the parameter of long-term natural distribution reads as follows: 'its natural range and areas it covers within that range are stable or increasing'.
- 98.** Individual influences – such as damaging occurrences that cause environmental damage – may relate to one or more of these parameters and qualifications. An individual influence does not necessarily need to affect all the different parameters and qualifications at the same time.
- 99.** In the context of the nature directives, the Commission services have produced documentation clarifying concepts such as 'natural range'¹⁰⁸.

The assessment of significance

Circumstances

- 100.** As is clear from paragraphs 14 above, a wider range of operators and a wider range of occupational activities are relevant for purposes of damage to protected species and natural habitats than for purposes of water damage and land damage. The assessment of significance of adverse effects therefore relates to a potentially wider range of causes, liable persons and damage factors.

Context

- 101.** As can be seen from the text in Box 3, the concept of significance is expressed in terms of damage having 'significant adverse effects on reaching or maintaining the favourable conservation status' of protected species and natural habitats.
- 102.** As can be inferred from paragraphs 95 to 99 above, adverse effects may be significant where a damaging occurrence influences only one or some of the parameters and qualifications mentioned in the definition of 'favourable conservation status'. For example, the killing of a rare bird of prey through illegal use of poison in a land management activity may adversely affect the bird's population dynamics and range

¹⁰⁸ See species protection guidance at page 11.

without reducing the available habitat (although the presence of poisons will, of course, impair the natural resource services that the habitat provides for the bird).

103. The conservation status of protected species and natural habitats is a matter of fact and is not fixed and immutable. The nature directives aim to either maintain favourable conservation status where this is already attained, or to reach favourable conservation status where the current status is unfavourable. By referring to reaching or maintaining favourable conservation status, the text of the definition takes account of both possibilities. Thus, where the conservation status is already favourable, adverse effects will relate to maintenance of a positive *status quo*; and, where the conservation status is unfavourable, the adverse effects will relate to improvement of a current negative *status quo*. This means that adverse effects on a protected species or natural habitat in unfavourable status cannot be treated as lying outside the scope of damage to a protected species or natural habitat on the sole ground that the species or habitat is already in a poor condition. Instead, the capacity of the species or habitat to reach favourable conservation status – and any set-back to that capacity - must be addressed.

104. In practice, many of the protected species and natural habitats falling within the scope of the Environmental Liability Directive and the nature directives are in unfavourable conservation status¹⁰⁹.

105. Where a species or habitat has unfavourable conservation status, the nature directives require measures to restore it to favourable conservation status¹¹⁰. In this context, adverse effects on restoration measures in place with a view to reaching favourable conservation status need to be taken into account. Such measures can take the form of habitat restoration measures or species reintroduction programmes, for instance. An example would be taking into account, in respect of a damaging occurrence involving fish mortality, any site-specific active conservation measures aimed at improving the conservation status of a fish species affected. This will relate to the aspect of population dynamics. Adverse effects on restoration potential should also be considered.

The carrying out of the assessment

106. The definition requires that significance is assessed 'with reference to the baseline condition, taking account of the criteria set out in Annex I'.

Box 7: Text of the criteria set out in Annex I of the Directive

The significance of any damage that has adverse effects on reaching or maintaining the favourable conservation status of habitats or species has to be assessed by reference to the conservation status at the time of the damage, the services provided by the amenities they produce and their capacity for natural regeneration. Significant adverse changes to the baseline condition should be determined by means of measurable data such as:

¹⁰⁹ See for example results published by the European Environment Agency at <https://www.eea.europa.eu/themes/biodiversity/state-of-nature-in-the-eu/state-of-nature-2020>

¹¹⁰ See article 2(2) of the Habitats Directive.

- *the number of individuals, their density or the area covered,*
- *the role of the particular individuals or of the damaged area in relation to the species or to the habitat conservation, the rarity of the species or habitat (assessed at local, regional and higher level including at Community level),*
- *the species' capacity for propagation (according to the dynamics specific to that species or to that population), its viability or the habitat's capacity for natural regeneration (according to the dynamics specific to its characteristic species or to their populations),*
- *the species' or habitat's capacity, after damage has occurred, to recover within a short time, without any intervention other than increased protection measures, to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.*

Damage with a proven effect on human health must be classified as significant damage.

The following does not have to be classified as significant damage:

- *negative variations that are smaller than natural fluctuations regarded as normal for the species or habitat in question,*
- *negative variations due to natural causes or resulting from intervention relating to the normal management of sites, as defined in habitat records or target documents or as carried on previously by owners or operators,*
- *damage to species or habitats for which it is established that they will recover, within a short time and without intervention, either to the baseline condition or to a condition which leads, solely by virtue of the dynamics of the species or habitat, to a condition deemed equivalent or superior to the baseline condition.'*

107. The baseline condition relates to the specific area or the specific species population or populations concerned by the adverse effects. The best information available should be used to address these.

108. Allowing for the area-specific or population-specific nature of the assessment exercise, the baseline condition should relate to the parameters and qualifications mentioned above. For natural habitats listed in Annex II of the Habitats Directive, for instance, this would involve looking at the habitats present on a particular site, the way they are structured and function, and their typical species. There may, for instance, be a mosaic of different natural habitats present – or a habitat may function in relationship to a water body (as where a salt-marsh functions according to the tidal movements in a coastal water). For Natura 2000 sites, the standard data form is likely to be an important source of information¹¹¹, also accessible via the ELD biodiversity damage Register ('Baseline Info Source Europe' page, covering the 'Natura 2000 network viewer': <https://natura2000.eea.europa.eu/>).

¹¹¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32011D0484&from=EN>

- 109.** In determining these specificities, a number of possible practical challenges may arise: determining the best information available in the circumstances, and ensuring the reliability of the information.
- 110.** Where damage has already occurred, the damage itself may be an impediment to estimating the baseline condition. Where a habitat has been damaged or destroyed, or species displaced from it, it may be very difficult to ascertain the baseline condition by means of information collected *ex post*. Precise quantification of what has been lost is not, however, required, since the definition refers to 'estimated'. Reference can be made to Case C-374/98, *Commission v France*¹¹² in which the Court indicated that an advantage should not be derived from non-fulfilment of the requirements of the Birds Directive. In the context of the Directive, an operator who, through an unlawful act or omission, destroys or damages the basis on which data might be collected (by, for example, filling in a protected wetland for economic gain) should not derive a benefit from this as compared to an operator who acts lawfully.
- 111.** Also relevant is Case C-157/89, *Commission v Italy*, the Court considered the concept of best information available in the context of the Birds Directive, confirming the role of scientific literature of a general character in a context where more specific literature is unavailable¹¹³.
- 112.** Even where a site has been seriously damaged, it may be possible to obtain information on the baseline condition using existing earth observation data. Furthermore, where information is limited, it may be appropriate to establish the baseline condition by using data from similar sites unaffected by a damaging occurrence (i.e. 'reference sites') or by using models.¹¹⁴
- 113.** The Commission has published an Excel table entitled *Biodiversity baseline condition*¹¹⁵, which covers in most comprehensive form information sources at EU level and at the level of all Member States, including site specific information such as 'Standard Data Forms' of all Natura 2000 sites, and also provides methodological approaches at Union level and national levels to help determine the baseline condition of protected species and natural habitats¹¹⁶.
- 114.** The concept of best information available also covers the *quality* of the information used to establish the baseline condition, and the inferences drawn from the information used. Care needs to be taken with the reliability and validity of information as well as the inferences drawn from it, in particular if an operator denies that adverse effects have arisen or will arise. In this context, reference may be made to Case C-209/02, *Commission v Austria*, in which the Court found that the competent authorities had not

¹¹³ See paragraph 15 of the judgment.

¹¹⁴ Environmental Liability Directive: Training Handbook and Accompanying Slides. European Commission/Eftec/Stratus Consulting. February 2013", p. 69.

¹¹⁵ <http://ec.europa.eu/environment/legal/liability/>

¹¹⁶ [Biodiversity baseline condition](#)

drawn the correct inferences from a scientific appraisal of the likely effects of a project in a Natura 2000 site¹¹⁷.

115. With regard to the situation *after* the damaging occurrence, the first sentence of the first paragraph of Annex I helps to put the baseline condition in context, referring to conservation status, services provided by amenities, and capacity for natural regeneration. These represent general contextual criteria, i.e. what is generally known about the protected species or natural habitats exposed to adverse effects from the damaging occurrence (the above-mentioned Excel table entitled *Biodiversity baseline condition* is intended to help). The references in the definition of 'conservation status' to the European territory of the Member States to which the Treaty applies, the territory of a Member State and natural range allow for this context to be established at different levels. A rare endemic and geographically confined habitat, for instance, will present a different picture to a habitat that is widely distributed both within and across Member States.

116. The second sentence of the first paragraph of Annex I refers to the determination of adverse changes by reference to measurable data, providing examples. This sentence serves to underline that adverse effects concern measurable adverse changes and impairments. The data relates to both the specific areas and populations affected and the species and habitat types concerned more generally. This implies a role for both site-specific and population-specific information and information of a more general character (such as that found in scientific literature, for instance):

- The first indent refers to 'the number of individuals, their density or the area covered'. For protected species, this can encompass both the number of individuals killed or the number of individuals that have suffered harm or other detriment. For natural habitats, the area covered can encompass the habitats of protected species, breeding sites and resting places, and natural habitats listed in Annex I to the Habitats Directive, and can relate to habitat loss, habitat deterioration and impairment of the services these habitats provide;
- The second indent has a comparative purpose and aims at relating the individuals and area affected with the wider conservation of the species and habitats concerned. The reference to assessment at local, regional and higher level resonates with the reference to European and Member State territories and natural range in the definition of 'conservation status';
- The third indent focuses on the capacity for recovery of the species and habitats affected. Clearly, these may vary. Some natural habitats have abiotic features which cannot regenerate. An example is the limestone pavement which featured in Case C-258/11, *Sweetman*¹¹⁸ and which was identified as threatened with permanent destruction in the context of an assessment process under the Habitats Directive. Such a situation of permanent loss could conceivably arise with regard to the Environmental Liability Directive;

¹¹⁷ See in particular paragraph 26 of the judgment.

¹¹⁸ See paragraph 11 of judgment.

- The fourth indent focuses on a time factor, and is closely related to the third indent. The references to a 'short time' and to an absence of intervention and allows for the possibility that a species or habitat may recover quickly of its own accord. It is to be stressed, however, that this is in relation to the baseline condition. The specifics of the area and population affected must therefore be taken into account. It cannot be excluded, for instance, that local factors may result in recovery taking longer than might be the case elsewhere.

117. As previously noted, the assessment process is not an end in itself, but for the purposes of identifying a need for preventive measures, immediate management of damage factors and remedial measures, as the case may be. The time-critical nature of the first and second purposes needs to be reflected in the assessment process. The text of the definition of 'damage to protected species and natural habitats' refers to assessment 'taking account' of the criteria of Annex I. This should allow a focus on those aspects of Annex I that are necessary for a rapid determination of the need for preventive measures or immediate management of damage factors. For purposes of remedial measures, a more in-depth assessment is likely to be appropriate.

The determination of significance

118. For purposes of preventive measures and measures to immediately manage damage factors, a determination of significance should be made if the assessment results – or ought to result - in a reasonable belief that, without such measures, adverse changes and impairments of the kind mentioned at paragraphs 119 and 120 below will result.

119. Subject to the criteria on non-significance mentioned at paragraph 122 and 123 below, for purposes of remedial measures in respect of natural habitats, adverse changes and impairments will be significant if, in respect of the area of natural habitat affected, they result in one or more of the following:

- a measurable permanent or interim loss of the area covered by the habitat;
- a measurable deterioration in respect of the structure or functioning of the habitat;
- a measurable permanent or interim reduction of the range of the habitat;
- a measurable permanent or interim loss of typical species, or a reduction in their range or available habitats;
- a measurable permanent or interim impairment of natural services linked to the area, structure, and functions of the natural habitat and its typical species;
- a measurable gap between the time when the adverse effects occur and the time when, for the area, structure, functions and typical species concerned, the baseline condition is restored.

120. Subject to the criteria on non-significance mentioned at paragraphs 122 and 123 below, for purposes of remedial measures in respect of a protected species, adverse changes and impairments will be significant if, in respect of the population affected, they result in one or more of the following:

- a measurable permanent or interim population loss (including a loss of an individual or individuals) which affects population dynamics in the area where the adverse effects occur;
- a measurable permanent or interim reduction in the range of the species concerned;
- a measurable permanent or interim reduction in habitats available to the species concerned for its long-term maintenance;
- a measurable permanent or interim impairment of natural services linked to the population loss, range reduction or reduction in available habitats;
- a measurable gap between the time when the adverse effects occur and the time when, for the population, extent of range, and availability of habitats, the baseline condition is restored.

121. The second paragraph of Annex I provides that damage with a proven effect on human health must be classified as significant damage. It is possible that an adverse change in a protected species or a natural habitat or the impairment of a service could include effects which, because of the damage factors involved, have a parallel relevance for human health. For example, the contamination of a natural habitat by toxic substances might at the same time, expose human beings to adverse health effects.

122. The final paragraph of Annex I indicates what need not be considered as significant. In Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein eV*, the Court stated that: *‘It is apparent from the use of the words ‘does not have to’ that it is open to the Member States when transposing the directive to regard such damage as significant or as not significant for the purposes of Annex I thereto.’*¹¹⁹ The Court also found that the provisions of this paragraph must be interpreted strictly¹²⁰.

123. As regards the content of the final paragraph of Annex I:

- The first indent refers to negative variations that are smaller than normal natural fluctuations. This relates to the possible non-static nature of the baseline condition mentioned at paragraph 65 above. There is a focus on the size of the negative variations relative to natural variations.
- The second indent refers to negative variations due to natural causes or normal site management. The Court considered this indent in detail in Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig Holstein e. V.* The case concerned regular drainage of a Natura 2000 wetland carried out by a public body in order to serve agriculture. This caused water levels to fall, with adverse effects on a protected bird species, the Black Tern. The Court ruled that the term ‘normal management’ relates to both habitats records and target documents (which relate to management measures directed by competent authorities) as well as previous management by owners or operators¹²¹. It found that *‘in order not to negate the effectiveness of the word ‘normal’ in the context of environmental protection, it*

¹¹⁹ Paragraph 36

¹²⁰ See paragraphs 44-45.

¹²¹ See paragraph 49.

*should be added that management can be regarded as normal only if it is consistent with good practices such as, inter alia, good agricultural practices.*¹²² The Court also found that the management of a site covered by the Habitats and the Birds Directive can cover agricultural activities, including irrigation, but can be regarded as normal only if it complies with the objectives and obligations laid down in those directives¹²³. This ruling applies to all sites covered by the nature directives, not just Natura 2000 sites¹²⁴. So far as Natura 2000 sites are concerned, the importance of appropriate site conservation objectives deserves mention.

- The third indent refers to short natural recovery times for habitats or species to a condition equivalent or superior to the baseline condition.

Exclusions

124. The definition of 'damage to protected species and natural habitats' provides for exclusions by reference to Articles 6(3) and (4) and 16 of the Habitats Directive and Article 9 of the Birds Directive. In Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein*, the Court held that these exclusions must be interpreted strictly¹²⁵.

125. A number of inferences can be drawn from the references to these provisions of the nature directives.

126. Firstly, the mere existence of an authorisation under one of the afore-mentioned provisions does not result in the blanket exclusion of adverse effects from the scope of damage to protected species and natural habitats. For the adverse effects to be excluded:

- They must have been previously identified;
- The causal act must have been expressly authorised. If an operator exceeds the conditions set in an authorisation (by, for example, encroaching more on a natural habitat than an authorisation allows), liability may arise for adverse effects related to the non-compliance.

127. Secondly, the wording of the exclusions indicate that liability under the Environmental Liability Directive *may* arise in respect of situations where there is no authorisation whatsoever, but the requirements of Articles 6(3) and 4 and 16 of the Habitats Directive and Article 9 of the Birds Directive are applicable. This will be the case, for example, where an operator ought to have obtained an authorisation in order to lawfully carry out an occupational activity but did not obtain one¹²⁶.

¹²² See paragraph 52.

¹²³ See paragraph 55.

¹²⁴ This follows from the references in paragraph 54 of the judgment to management measures provided for in detail in Articles 6 and 12 to 16 of the Habitats Directive and Articles 3 to 9 of the Birds Directive.

¹²⁵ See paragraphs 44-45.

¹²⁶ Case C-477/19, *IE v Magistrat der Stadt Wien* at paragraphs 11 and 12 illustrates how such circumstances might arise. Construction works, described as 'harmful measures' by the Court, adversely affected a breeding and resting place of a protected species, the European hamster, without a prior authorisation having been obtained.

6. 'Damage to water'

128. As can be seen from Box 3 above, in terms of material scope, 'damage to water' relates to two main categories of waters: the waters concerned under the Water Framework Directive; and marine waters within the scope of the Marine Strategy Framework Directive. The Guidelines consider these in turn.

(A) Waters concerned under the Water Framework Directive

Material and geographical scope of the waters concerned

Box 8: Definitions of 'waters concerned' found in the Water Framework Directive.

The Water Framework Directive expressly defines two basic classes of water, 'surface water' and 'groundwater'

Article 2(1) of the Water Framework Directive defines 'surface water' to mean *'inland waters, except groundwater; transitional waters and coastal waters, except in respect of chemical status for which it shall also include territorial waters'*.

Article 2(2) of the Water Framework Directive defines 'groundwater' to mean *'all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil'*.

As can be seen, the definition of 'surface water' refers to four sub-classes of waters: 'inland waters', 'transitional waters', 'coastal waters' and 'territorial waters'. The first three of these are themselves expressly defined.

Article 2(3) of the Water Framework Directive defines 'inland water' to mean *'all standing or flowing water on the surface of the land, and all groundwater on the landward side of the baseline from which the breadth of territorial waters is measured'*.

Article 2(6) of the Water Framework Directive defines 'transitional waters' to mean *'bodies of surface water in the vicinity of river mouths which are partly saline in character as a result of their proximity to coastal waters but which are substantially influenced by freshwater flows'*.

Article 2(7) of the Water Framework Directive defines 'coastal water' to mean *'surface water on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters'*.

129. As can be seen from the definitions set out in Box 8, the geographical scope of surface water extends to coastal waters, and, with regard to chemical status, to territorial waters. Territorial waters extend for twelve nautical miles into the sea from the baseline referred to in the definition of 'inland water'. Two additional points may be noted. Firstly, so far as surface water is concerned, there is some overlap with marine waters – as can be seen from Box 11 below. Where there is overlap, the Water Framework Directive takes precedence for purposes of the Environmental Liability Directive. Secondly, the Water

Framework Directive includes further relevant sub-divisions of waters, as Box 9 below shows. Thirdly, when it comes to assessing the significance of adverse effects on the waters concerned under the Water Framework Directive, account needs to be taken of geographical limitations linked to the reference concepts for adverse effects. These are considered below.

Box 9: Further relevant definitions of sub-divisions of ‘waters concerned’ in the Water Framework Directive.

Article 2(4) of the Water Framework Directive provides that 'river' means *'a body of inland water flowing for the most part on the surface of the land but which may flow underground for part of its course'*.

Article 2(5) of the Water Framework Directive provides that 'lake' means *'a body of standing inland surface water'*.

Article 2(8) of the Water Framework Directive provides that 'artificial water body' means *'a body of surface water created by human activity'*.

Article 2(9) of the Water Framework Directive provides that 'heavily modified water body' means *'a body of surface water which as a result of physical alterations by human activity is substantially changed in character, as designated by the Member State in accordance with the provisions of Annex II'*.

Article 2(10) of the Water Framework Directive provides that 'body of surface water' means *'a discrete and significant element of surface water such as a lake, a reservoir, a stream, river or canal, part of a stream, river or canal, a transitional water or a stretch of coastal water'*.

Article 2(12) of the Water Framework Directive provides that 'body of groundwater' means *'a distinct volume of groundwater within an aquifer or aquifers'*.

Article 2(11) of the Water Framework Directive provides that 'aquifer' means *'a subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater'*.

Reference concepts for adverse effects

- 130.** The reference concepts for adverse effects comprise the 'ecological, chemical or quantitative status or the ecological potential, as defined in Directive 2000/60/EC' of the waters concerned.

Box 10: Reference concepts as defined in the Water Framework Directive.

The Water Framework Directive contains precise definitions of 'ecological status' and 'quantitative status'.

Article 2(21) of the Water Framework Directive provides that 'ecological status' is *'an expression of the quality of the structure and functioning of aquatic ecosystems'*

associated with surface waters, classified in accordance with Annex V'.

Article 2(26) of the Water Framework Directive provides that 'quantitative status' is *'an expression of the degree to which a body of groundwater is affected by direct and indirect abstractions'.*

The Water Framework Directive does not contain a precise definition of 'chemical status' but its Articles 2(25) and 2(26) define 'good surface water chemical status' and 'good groundwater chemical status' respectively.

'Good surface water chemical status' is defined to mean *'the chemical status required to meet the environmental objectives for surface waters established in Article 4(1)(a), that is the chemical status achieved by a body of surface water in which concentrations of pollutants do not exceed the environmental quality standards established in Annex IX and under Article 16(7), and under other relevant Community legislation setting environmental quality standards at Community level'.*

'Good groundwater chemical status' is defined to mean *'the chemical status of a body of groundwater, which meets all the conditions set out in table 2.3.2 of Annex V'.*

The Water Framework Directive does not contain a precise definition of 'ecological potential' but its Article 2(23) defines 'good ecological potential' to mean *'the status of a heavily modified or an artificial body of water, so classified in accordance with the relevant provisions of Annex V'.*

- 131.** From the definition of 'good surface water chemical status', it can be inferred that, for surface waters, 'chemical status' concerns concentrations of chemical pollutants. From the definition of 'good groundwater chemical status', it can be inferred that, for groundwaters, 'chemical status' concerns concentrations of chemical pollutants, as well as conductivity. Conductivity relates to saline or other intrusion¹²⁷.
- 132.** From the definition of 'good ecological potential', it can be inferred that 'ecological potential' only concerns heavily modified or artificial water bodies.
- 133.** It can be seen that the reference concepts themselves refer to multiple further concepts in the Water Framework Directive. Depending on the waters adversely affected, these further concepts will need to be taken into account in the application of the definition of 'water damage'.
- 134.** The definition of 'ecological status' refers to the quality of the structure and functioning of aquatic ecosystems associated with surface waters, classified in accordance with Annex V of the Water Framework Directive. Annex V refers to five sub-classes or divisions of surface water: rivers; lakes; transitional waters; coastal waters; artificial and heavily modified water bodies. Rivers, lakes and artificial and heavily modified water bodies are all, in fact, further divisions of the sub-class 'inland water' referred to in Box 9 above and all are expressly defined in the Water Framework Directive – see Box 10 above. Annex V also sets out quality elements relevant to these different sub-classes and divisions of surface water: biological elements;

¹²⁷ See Table 2.3.2 of Annex V of the Water Framework Directive.

hydromorphological elements supporting the biological elements; chemical and physico-chemical elements supporting the biological elements; general elements; and specific pollutants.

135. The definitions of 'quantitative status' and 'good groundwater chemical status' both refer to 'body of groundwater', a term which is separately defined (see Box 10 above).

136. The definition of 'good surface water chemical status' refers to 'body of surface water', a term which is separately defined (see Box 10 above).

137. The definitions of 'quantitative status' and 'good groundwater chemical status' both refer to 'body of groundwater', a term which is separately defined (see Box 10 above).

Assessment of significance

Circumstances

138. In contrast to damage to protected species and natural habitats, only occupational activities described in Annex III are relevant for purposes of assessing the significance of adverse effects on waters. Several of the occupational activities, such as abstraction and impoundment, are especially relevant to water.

Context

139. The formulation of the reference concepts mean that the assessment of significance of adverse effects is to be done according to the different classes and divisions of water adversely affected, as well as the different reference status concepts, i.e. ecological, chemical, and/or quantitative status and ecological potential. The following classes and divisions all need to be distinguished:

- groundwaters;
- rivers;
- lakes;
- transitional waters;
- coastal waters; territorial waters;
- artificial and heavily modified water bodies.

140. It is possible that damage will affect more than one of these, but, if so, the damage will need to be assessed with reference to each relevant water class or division. This is because status concepts and status elements vary according to water class or division.

141. The connectedness of different water bodies needs to be taken into account. Chemical pollution may pass between different classes and divisions of water, for instance – as where a chemical spillage in a river subsequently pollutes a lake.

142. The notion of services is important. For example, water damage may involve a loss of services to protected species and natural habitats, and water damage may coincide with damage to protected species and natural habitats. Water damage may also involve a loss of services for the benefit of the public, such as fishing.

143. It is important to note that, when used in the implementation of the Water Framework Directive, the reference concepts will operate in a different context. Under the Water Framework Directive, they will relate to water bodies defined under that directive, and assessed on the basis of monitoring programmes that leave quite some discretion to Member States in terms of frequencies and monitoring sites. It is clear that, within this separate legal framework, the concepts are principally used for the purpose of achieving long-term objectives, through appropriate river basin management and planning of measures. The Environmental Liability Directive serves a different purpose of preventing and remediating localised, often accidental or sudden, damage not necessarily affecting the status of a water body taken as a whole, especially where the water body is a large spatial unit.

144. It is necessary therefore to interpret and use the reference concepts, namely ‘the ecological, chemical or quantitative status or the ecological potential’ in a manner enabling effective implementation of the Environmental Liability Directive. The Environmental Liability Directive refers to ‘waters’ rather than ‘water bodies’. The impairment of water as a natural resource service may relate to areas of water that are more limited than those comprised in the water bodies delineated by a Member State for the purpose of implementing the Water Framework Directive. The concept of ‘baseline condition’ refers to natural resources and services rather than the more specific unit of a water body, and ‘the best information available’ is not exclusively bound to information derived from the implementation of the Water Framework Directive, such as monitoring information. Finally, in Case C-535/18, *IL and Others v Land Nordrhein-Westfalen*, concerning the risk of chemical pollution of groundwater caused by the construction of a highway, the Court noted that there may be deterioration in good part of the water body, even though the status of the whole body may still be considered to be good¹²⁸; action might nevertheless be required pursuant to the Groundwater Directive and the Water Framework Directive. Applying the Environmental Liability Directive at levels other than the entirety of a water body would not be at variance with the Water Framework Directive. This being said, the circumstances of a specific damaging occurrence may make it appropriate to apply the Environmental Liability Directive at the level of an entire water body – for example, a toxic spillage may affect the entirety of a single lake.

Focus and carrying out of the assessment

145. The relevant classes or division of waters dictate the status concepts and elements that are potentially relevant to the assessment:

- For rivers, lakes, transitional waters, coastal waters, and artificial and heavily modified surface water bodies, these will be:
 - concentrations of chemicals;
 - biological elements;
 - hydromorphological elements supporting the biological elements;
 - chemical and physico-chemical elements supporting the biological elements;
 - general elements; and

¹²⁸ See paragraphs 115 and 116.

- specific pollutants;
- For territorial waters, they will consist of concentrations of chemicals;
- For a body of groundwater, they will comprise:
 - chemical concentrations,
 - conductivity, and
 - the effects of water abstraction.

146. As with damage to protected species and natural habitats, the significance of the adverse effects of water damage should be assessed with reference to the baseline condition. The expression 'baseline condition' is not specifically mentioned in the definition of water damage. However, as can be seen from Box 4 above, the definition of 'baseline condition' covers all natural resources and services. Furthermore, the baseline condition is mentioned in Annex II.1 in the context of both water damage and damage to protected species and natural habitats.

147. It follows from the definition of 'baseline condition' that the assessment of significance should relate to the area or areas of waters adversely affected, and that it should involve a comparison between the condition of that area or those areas *before* and *after* the damaging occurrence.

148. The Water Framework Directive requires all the waters concerned to be classified in accordance with Annex V of that directive into different status categories. The classifications relate to the status elements that are to be the basis of both the estimation of the baseline condition and the measurement of adverse changes or possible adverse changes and impairments of services. Classifications already made can therefore help to establish the condition of the area or areas of water adversely affected.

149. To take one relevant class of waters, rivers, the status categories for ecological status are high, good, moderate, poor and bad¹²⁹.

150. For rivers classified as having high, good and moderate ecological status, the Water Framework Directive provides a detailed set of descriptions corresponding to several of the different status elements:

- For the biological quality elements, there are descriptions of the following elements: phytoplankton; macrophytes and phytobenthos; benthic invertebrate fauna; and fish fauna;
- For hydromorphological quality elements, there are descriptions of the following elements: hydrological regime; river continuity; morphological conditions;
- For physico-chemical quality elements, there are descriptions of the following elements: general conditions; specific synthetic pollutants; specific non-synthetic pollutants.

151. To take another relevant class of waters, groundwaters, and the reference concept of 'quantitative status', there is one status element, namely 'groundwater level', for which the Water Framework Directive provides a detailed description. This description reads

¹²⁹ See Annex V.1.2.1 of the Water Framework Directive.

as follows: *The level of groundwater in the groundwater body is such that the available groundwater resource is not exceeded by the long-term annual average rate of abstraction. Accordingly, the level of groundwater is not subject to anthropogenic alterations such as would result in:*

- *failure to achieve the environmental objectives specified under Article 4 for associated surface waters,*
- *any significant diminution in the status of such waters,*
- *any significant damage to terrestrial ecosystems which depend directly on the groundwater body,*

*and alterations to flow direction resulting from level changes may occur temporarily, or continuously in a spatially limited area, but such reversals do not cause saltwater or other intrusion, and do not indicate a sustained and clearly identified anthropogenically induced trend in flow direction likely to result in such intrusions.*¹³⁰

152. To take the same class of waters, groundwaters, and the reference concept of 'chemical status', there are two status elements, namely 'general' and 'conductivity', for which the Water Framework Directive provides detailed descriptions. The description reads as follows for the status element 'general': *The chemical composition of the groundwater body is such that the concentrations of pollutants:*

- *as specified below, do not exhibit the effects of saline or other intrusions*
- *do not exceed the quality standards applicable under other relevant [Union] legislation in accordance with Article 17*
- *are not such as would result in failure to achieve the environmental objectives specified under Article 4 for associated surface waters nor any significant diminution of the ecological or chemical quality of such bodies nor in any significant damage to terrestrial ecosystems which depend directly on the groundwater body'.*

153. As can be seen from the status element 'general' in respect of the chemical status of groundwaters, there are further cross-references within the description of good chemical status. In particular, there is reference to quality standards under other legislation in accordance with Article 17 of the Water Framework Directive. Since the Environmental Liability Directive was adopted, quality standards have been adopted in the form of Directive 2006/118/EC of the European Parliament and of the Council on the protection of groundwater against pollution and deterioration¹³¹ ('the Groundwater Directive').

154. All of the above-mentioned elements (and corresponding elements for the other classes and divisions of waters) are potentially relevant when estimating the baseline condition and measuring the adverse change or impairment of natural services. The nature of the damage factors – i.e. whether they are additive, subtractive, extractive or destructive – should indicate what range of status elements are likely to be relevant.

155. The varied nature of these status elements implies a varied range of techniques and methodologies to estimate and measure both the baseline condition and adverse changes

¹³⁰ See Annex V, 2.1.2 of the Water Framework Directive.

¹³¹ OJ L 372, 27.12.2006, p. 19

and impairments. They can include chemical analyses, habitat evaluation, toxicity measurements and bio-indices, for instance. Existing work done for purposes of classification and monitoring under the Water Framework Directive should be taken into account when estimating the baseline condition. Where no monitoring data exist for purposes of estimating the baseline condition of the areas of water adversely affected, it may be possible to extrapolate from data available for other similar areas of water, or from general reference sources.

156. With regard to impairment of natural resource services, the Water Framework Directive provides for a register of protected areas. These comprise, amongst others, areas used for the abstraction of drinking water; areas designated for the abstraction of economically significant aquatic species; and bodies of water designated as recreational waters, including areas designated as bathing waters, and Natura 2000 areas. The assessment of significance should take account of these to the extent that the status elements are relevant to their protection. This will often – but not always – be the case. It is possible, for example, that a damaging occurrence involves the introduction of micro-organisms into an area of water. While this may have adverse effects on a drinking water source or a bathing area, it will fall outside the scope of water damage unless it can be shown that it will also adversely affect the status elements. It may, however, sometimes come within the scope of land damage (see the next section).

The determination of significance

157. For adverse effects to be significant, it is not necessary that they concern all of the status elements that are potentially relevant. It must, however, concern at least one¹³².

158. For purposes of preventive measures and measures to immediately manage damage factors, a determination of significance should be made if the assessment results – or ought to result - in a reasonable belief that, without such measures, adverse changes and impairments of the kind mentioned at paragraph 159 below will result.

159. For purposes of remedial measures, adverse changes and impairments will be significant if, in respect of the area or areas of water affected, they result in:

- a measurable permanent or interim loss in respect of a status element such that, for that status element, the area of water affected no longer conforms to the classification category that would have applied to that area before the adverse change or impairment took effect. To take one element as an example, namely fish fauna in respect of a river, adverse effects will be significant if a damaging occurrence such as a toxic spillage entirely wipes out a fish population in the area of water affected;
- a measurable deterioration in respect of a status element such that, for that status element, the area of water affected no longer conforms to the classification category that would have applied to that element before the adverse change or impairment took effect. To take the example of fish fauna in a river, adverse effects will be significant if the damaging occurrence causes a level of fish

¹³² This is consistent with the approach that the Court has taken with regard to the Water Framework Directive itself, see Case C-461/13.

mortality to measurably exceed normal levels of fish mortality (without entirely wiping out the fish population). To take the example of the status element groundwater level in a body of groundwater, adverse effects will be significant if the groundwater level has been or is being measurably reduced to an extent that also measurably reduces the available groundwater resource

- a measurable impairment of natural services linked to the status elements that have suffered loss or deterioration. To take the same example of fish fauna in a river, if the river is protected for purposes of recreational fishing, adverse effects will be significant if the damaging occurrence causes the area of water to have a reduced availability of fish for recreational fishing; a measurable gap between the time when the adverse effects occur and the time when, for the status elements concerned, the baseline condition is restored. To take the same example of fish fauna in a river, adverse effects will be significant if, notwithstanding the application of restoration measures, the adverse effects will result in a reduced fish population for a period that measurably exceeds periods corresponding to the natural rate of fluctuation of the fish population.

160. For adverse effects to be significant, it is not necessary that they result in a change of classification for purposes of the Water Framework Directive – although a change to a lower status classification would be an example of a significant adverse effect¹³³.

Exclusions

161. The definition of 'water damage' excludes from its scope adverse effects where Article 4(7) of the Water Framework Directive applies. It can be inferred from Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein*, that this exclusion must be interpreted strictly¹³⁴.

162. In Case C-461/13,¹³⁵ the Court decided that the concept of 'deterioration of the status' of a body of surface water in Article 4(1)(a)(i) of the Water Framework Directive must be interpreted as meaning that there is deterioration as soon as the status of at least one of the quality elements, within the meaning of Annex V to the directive, falls by one class, even if that fall does not result in a fall in classification of the body of surface water as a whole. However, if the quality element concerned, within the meaning of that annex, is already in the lowest class, any deterioration of that element constitutes a 'deterioration of the status' of a body of surface water, within the meaning of Article 4(1)(a)(i).

163. In Case C-529/15, the Court considered the application of the Article 4(7) exclusion in the definition of 'water damage'. It found that *'in the event that an authorisation has been granted pursuant to national provisions without an examination whether the*

¹³³ It is useful to note that, in Case C-535/18, *IL and Others v Land Nordrhein-Westfalen*, which concerns application of the Water Framework Directive in relation to the chemical status of groundwater, the Court took account of the possibility of localised pollution within a groundwater body as disclosed by an exceedance recorded at a single monitoring point. It considered that Member States are obliged to take measures in accordance with Article 11 of the Water Framework Directive in respect of the affected area of groundwater. See paragraphs 115 and 116 of the judgment.

¹³⁴ See paragraphs 44-45.

¹³⁵ *Bund für Umwelt und Naturschutz Deutschland eV v Bundesrepublik Deutschland*.

conditions laid down in Article 4(7)(a) to (d) of Directive 2000/60/EC ... have been complied with, a national court is not required to itself verify whether the conditions laid down in that article are satisfied in order to determine whether environmental damage within the meaning of Article 2(1)(b) of Directive 2004/35, as amended by Directive 2009/31, has arisen'.

(B) Marine waters concerned under the Marine Strategy Framework Directive

Material and geographical scope of marine waters

Box 11: Definition of 'marine waters' in the Marine Strategy Framework Directive.

Article 3(1) of the Marine Strategy Framework Directive provides that 'marine waters' means:

'(a)waters, the seabed and subsoil on the seaward side of the baseline from which the extent of territorial waters is measured extending to the outmost reach of the area where a Member State has and/or exercises jurisdictional rights, in accordance with the Unclos, with the exception of waters adjacent to the countries and territories mentioned in Annex II to the Treaty and the French Overseas Departments and Collectivities; and

(b)coastal waters as defined by Directive 2000/60/EC, their seabed and their subsoil, in so far as particular aspects of the environmental status of the marine environment are not already addressed through that Directive or other Community legislation;'

164. As can be seen, the definition of 'marine waters' in the Marine Strategy Framework Directive overlaps with the definition of 'coastal waters' in the Water Framework Directive, and the Marine Strategy Framework Directive applies in so far as particular aspects of the environmental status of the marine waters are not already addressed through the Water Framework Directive or other Union legislation. Furthermore, there is an overlap with the coverage of 'territorial waters' as referred to in the Water Framework Directive. The latter instrument applies within territorial waters whenever the damage concerns chemical status.

Reference concept for adverse effects

165. The reference concept for adverse effects on 'marine waters' is their environmental status as defined in the Marine Strategy Framework Directive, in so far as particular aspects of the environmental status of the marine environment are not already addressed through the Water Framework Directive (see foregoing paragraph) or the Habitats Directive and Birds Directive (see paragraph 93 above).

Box 12: Definition of 'environmental status'

Article 3(4) of the Marine Strategy Framework Directive provides that 'environmental status' means:

'the overall state of the environment in marine waters, taking into account the structure, function and processes of the constituent marine ecosystems together with natural physiographic, geographic, biological, geological and climatic factors, as well as physical, acoustic and chemical conditions, including those resulting from human activities inside or

outside the area concerned;'

166. As has been noted, the Water Framework Directive already addresses the following in respect of coastal waters: concentrations of chemicals; biological elements; hydromorphological elements supporting the biological elements; chemical and physico-chemical elements supporting the biological elements; general elements; and specific pollutants. In addition, the Water Framework Directive addresses chemical concentrations within territorial waters. Across all marine waters, the nature directives already address habitats and species that lie within the scope of the nature directives (see paragraph 93 above).

167. As has been noted further above, the Habitats Directive and the Birds Directive apply also to the marine environment, including in the Exclusive Economic Zone and the Continental Shelf where a Member State exercises jurisdiction (see paragraph 93 above).

The assessment of significance

Circumstances

168. As with the waters concerned under the Water Framework Directive, adverse effects for the purpose of the Environmental Liability Directive will only be relevant if there is a causal link between those and the occupational activities described in Annex III of the Environmental Liability Directive. The nature of these activities points to the nature of the damage factors that might give rise to adverse effects in marine waters.

169. The activities under Annex III of the Environmental Liability Directive most likely to be relevant for damage to marine waters are, insofar as not already covered by the Water Framework Directive:

- (a) industrial activities under Annex III.1 (operation of installations subject to permit in pursuance of Council Directive 96/61/EC concerning integrated pollution prevention and control¹³⁶), e.g. refining of mineral oil and gas in port areas;
- (b) waste management activities under Annex III.2 (collection, transport, recovery and disposal of waste and hazardous waste subject to permit or registration in pursuance of Council Directive 75/442/EEC on waste and Council Directive 91/689/EEC on hazardous waste¹³⁷), e.g. pollution through hazardous waste incidents including gradual pollution of the sea or intentional dumping of waste into the sea;
- (c) manufacture, processing, filling, release into the environment under Annex III.7(a) (of dangerous substances as defined in Article 2(2) of Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous substances¹³⁸), e.g. accidents and spillages into the sea causing damage to the marine environment

¹³⁶ Replaced by Directive 2010/75/EU on industrial emissions

¹³⁷ Merged and replaced by Directive 2008/98/EC on waste

¹³⁸ Replaced by Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

through offshore oil and gas operations (exploration and exploitation) in marine waters under the jurisdiction of a Member State.

However, the Offshore Safety Directive 2013/30/EU includes in addition some specific provisions and definitions, in particular Article 2(5), (11), (15), (16) and Article 7 OSD. Thus, it is not the ‘operator’ but the ‘licensee’ of an offshore exploration or production activity causing environmental damage, who is liable under the ELD;

(d) shipping activities under Annex III.8 (Transport by ... sea ... concerning minimum requirements for vessels bound for or leaving Community ports and carrying dangerous or polluting goods, as defined in Council Directive 93/75/EEC¹³⁹), e.g. transport at sea of dangerous and/or polluting goods in high quantities in containers (‘container loss at sea’) or ‘loss’ of plastics in significant quantities through shipping.

Please note the exception of the applicability in favour of some International Conventions from the International Maritime Organisation (IMO) according to Article 4(2) of the Environmental Liability Directive. In case an imminent threat of damage or actual damage to marine waters from an incident in respect of which liability or compensation falls into the scope of such a Convention listed in Annex IV¹⁴⁰ of the Directive, the Environmental Liability Directive does not apply.

According to Article 4(3) of the Directive the right of the operator to limit his liability in accordance with national legislation implementing certain International Conventions¹⁴¹ remains unaffected.

(e) transboundary shipment of waste within, into or out of the European Union under Annex III.12 (requiring an authorisation or prohibited in the meaning of Council Regulation (EEC) No 259/93¹⁴²), e.g. discharges of waste into the sea, which concurs potentially with activities under other activities above.

170. Table 2b ‘Uses and human activities in or affecting the marine environment’ in Commission Directive 2017/845/EU¹⁴³ contains also relevant indications as to the activities potentially causing marine water damage, although it is only those occupational activities that are also found in Annex III of the Environmental Liability Directive that will count for purposes of application of the Environmental Liability Directive.

171. Adverse effects may involve a change in marine waters or an impairment of the services they provide by reference to the baseline condition. As far as other natural resource categories are concerned, marine waters provide services to the natural habitats and protected species found in them, such as tidal flows, in the case of certain coastal habitats, or food sources in the case of marine mammals or seabirds. Such services are not

¹³⁹ Replaced by Directive 2002/59/EC establishing a Community vessel traffic monitoring and information system

¹⁴⁰ International Convention on Civil Liability for Oil Pollution Damage, 1992; International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage, 1992; International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001; International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996/2010 (not yet in force)

¹⁴¹ Convention on Limitation of Liability for Maritime Claims (LLMC), 1976; Strasbourg Convention on Limitation of Liability in Inland Navigation (CLNI), 1988

¹⁴² Replaced by Regulation (EC) No 1013/2006 of the European Parliament and of the Council on shipments of waste

¹⁴³ Commission Directive 2017/845/EU amending Directive 2008/56/EC of the European Parliament and of the Council as regards the indicative lists of elements to be taken into account for the preparation of marine strategies, OJ L 125, 18.5.2017, p. 27

confined to marine protected areas such as Natura 2000 sites designated under the nature directives. Nevertheless, they may be especially important for marine protected areas¹⁴⁴ (MPAs), covering *inter alia* SPAs under the Birds Directive and SACs under the Habitats Directive, as they may play an important role in the fulfilment of site conservation objectives. The notion of services also extends to services to people, such as fisheries.

172. The marine regions¹⁴⁵ and subregions¹⁴⁶ to which the Marine Strategy Framework Directive applies are defined in Article 4(1) and (2), respectively of that Directive.

Carrying out of the assessment

Box 13: Definition of 'good environmental status' in Article 3(5) of the Marine Strategy Framework Directive:

'5. 'good environmental status' means the environmental status of marine waters where these provide ecologically diverse and dynamic oceans and seas which are clean, healthy and productive within their intrinsic conditions, and the use of the marine environment is at a level that is sustainable, thus safeguarding the potential for uses and activities by current and future generations, i.e.:

(a) the structure, functions and processes of the constituent marine ecosystems, together with the associated physiographic, geographic, geological and climatic factors, allow those ecosystems to function fully and to maintain their resilience to human-induced environmental change. Marine species and habitats are protected, human-induced decline of biodiversity is prevented and diverse biological components function in balance;

(b) hydro-morphological, physical and chemical properties of the ecosystems, including those properties which result from human activities in the area concerned, support the ecosystems as described above. Anthropogenic inputs of substances and energy, including noise, into the marine environment do not cause pollution effects;

Good environmental status shall be determined at the level of the marine region or subregion as referred to in Article 4, on the basis of the qualitative descriptors in Annex I. Adaptive management on the basis of the ecosystem approach shall be applied with the aim of attaining good environmental status;'

173. The Marine Strategy Framework Directive requires Member States to determine a set of characteristics for good environmental status, per each marine region or subregion, on the basis of the eleven qualitative descriptors listed in its Annex I (see Box 14 below).

¹⁴⁴ According to Article 13(4) of the Marine Strategy Framework Directive, spatial protection measures including MPAs are a "measure" that MS can use in their programme of measures. Recital 6 of this Directive acknowledges that these are an important contribution to achieving good environmental status. Recital 21 moreover says 'It is crucial for the achievement of the objectives of this Directive to ensure the integration of conservation objectives, management measures and monitoring and assessment activities set up for spatial protection measures such as special areas of conservation, special protection areas or marine protected areas'.

¹⁴⁵ Baltic Sea; North-East Atlantic Ocean; Mediterranean Sea; Black Sea.

¹⁴⁶ In the North-East Atlantic Ocean: the Greater North Sea, including the Kattegat, and the English Channel; the Celtic Seas; the Bay of Biscay and the Iberian Coast; in the Atlantic Ocean the Macaronesian biogeographic region, being the waters surrounding the Azores, Madeira and the Canary Islands.

In the Mediterranean Sea: the Western Mediterranean Sea; the Adriatic Sea; the Ionian Sea and the Central Mediterranean Sea; The Aegean-Levantine Sea.

Box 14: Qualitative descriptors for determining good environmental status

- (1) *Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.*
- (2) *Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.*
- (3) *Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.*
- (4) *All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity.*
- (5) *Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters.*
- (6) *Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected.*
- (7) *Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems.*
- (8) *Concentrations of contaminants are at levels not giving rise to pollution effects.*
- (9) *Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards.*
- (10) *Properties and quantities of marine litter do not cause harm to the coastal and marine environment.*
- (11) *Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment.*

174. Criteria and methodological standards for each of the eleven descriptors for the determination of good environmental status by Member States have been adopted by Commission Decision (EU) 2017/848¹⁴⁷. For the purpose of the strategy under the Marine Strategy Framework Directive, the scale of the assessment is defined by the aforementioned Decision, following the parameters defined there (see further in the next paragraphs).

175. Threshold values for each criterion should be developed at Union level or at regional or subregional level (between Member States sharing a marine region or subregion) according to the requirements in Article 4 of Decision (EU) 2017/848¹⁴⁸. Recital 13 of this Decision explains the role of threshold values: *‘Threshold values should reflect, where appropriate, the quality level that reflects the significance of an adverse effect for a criterion and should be set in relation to a reference condition.’*

¹⁴⁷ Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU, OJ L 125, 18.5.2017, p. 43

¹⁴⁸ For the time being, threshold values have not yet been established for all criteria, but they are under development. An example would be the number of certain items of litter per square meter. For contaminants, the threshold value is the environmental quality standard set under the Water Framework Directive, as far as in place.

176. When looking at the criteria to determine good environmental status, in addition to the threshold value, the extent to which the threshold value is to be met in each area assessed is also relevant. The threshold values are set to reflect the significance of the adverse effect, pursuant to Article 4 of Decision (EU) 2017/848. Member States are to express the extent to which the threshold values are to be achieved, as part of their determination of good environmental status (Recital 15 of Decision (EU) 2017/848); this expression of extent can reflect that threshold values are not necessarily achieved in all areas of marine waters, thereby enabling the sustainable use of marine goods and services (Recital 14). Decision (EU) 2017/848 prescribes, for each descriptor, how the extent to which good environmental status has been achieved is to be expressed for each area, habitat or population.

177. The background framing the determination of damage to marine waters is hence set by the assessment results of marine waters which Member States carry out according to Article 8 of the MSFD (Initial assessment), and which they update according to Article 17 of the MSFD every six years (Updating). That background framework will also determine the individual damage measurement in terms of adverse effects in relation to the baseline condition of marine waters under the Environmental Liability Directive (see below ‘The assessment of significance’).

178. Against that background, the assessment of damage to marine waters under the Environmental Liability Directive requires a more specific procedure, determined by the need to establish the baseline condition of the area of marine waters affected by the damaging occurrence. The reference concept for the damage assessment is the ‘environmental status’ of marine waters, as defined in Article 3(4) of the Marine Strategy Framework Directive (see paragraph 165 above and Box 12 above) and as assessed and reported by the Member State in Article 8 usually by marine reporting units and updated through Article 17 of the Marine Strategy Framework Directive. The assessment of an individual damaging occurrence will reflect the elements of ‘good environmental status’ according to Article 3(5) Marine Strategy Framework Directive (see Box 13 above), the qualitative descriptors (see Box 14 above), the criteria and methodological standards to determine the good environmental status according to Decision (EU)2017/848 and the characteristics of good environmental status, determined by Member States under MSFD Article 9(1) and updated through Article 17. The inter-relationships of these different aspects of the determination of good environmental status are explained in SWD(2020) 62¹⁴⁹.

179. As with damage to protected species and natural habitats, and damage to water in connection with the Water Framework Directive (see section above), the significance of the adverse effects of marine water damage should be assessed with reference to the baseline condition. As with damage to other waters than those covered by the definition in Article 2(1)(b)(ii) of the Environmental Liability Directive, the definition of ‘baseline condition’ covers all natural resources and services. Furthermore, the baseline condition is

¹⁴⁹ Background document for the Marine Strategy Framework Directive on the determination of good environmental status and its links to assessments and the setting of environmental targets

mentioned in Annex II.1 in the context of both water damage and damage to protected species and natural habitats.

- 180.** The baseline condition for an instance of marine water damage relates to the specific area concerned by the adverse effects. It follows from the definition of 'baseline condition' that the assessment of significance should relate to the area or areas of marine waters adversely affected, and that it should involve a comparison between the condition of that area or those areas *before* and *after* the damaging occurrence. The best information available should be used to assess these.
- 181.** It follows from the formulation of the reference concept and the background framework built by the Marine Strategy Framework Directive that the assessment of significance of adverse effects should, for the purposes of the Environmental Liability Directive – as starting point – take account of the condition of the marine area affected, as assessed and reported according to Article 8, and its Article 17 updates, of the Marine Strategy Framework Directive.
- 182.** Not all of the descriptors may equally serve to the assessment of an instance of damage to marine waters under the Environmental Liability Directive. Some of them are clearly more relevant to this purpose, such as (1) 'Biological diversity is maintained. The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions' (5) 'Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters' and (8) 'Concentrations of contaminants are at levels not giving rise to pollution effects' than others. Also qualitative descriptor (10) 'Properties and quantities of marine litter do not cause harm to the coastal and marine environment' and (11) 'Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment' may play an increasingly important role within the assessment of damage under the Environmental Liability Directive at the appropriate scale under this Directive.
- 183.** Damage may be ascertained in terms of more than one qualitative descriptor. It is on the other hand sufficient for establishing marine water damage if only one of the qualitative descriptors in the area of the damage indicates an adverse effect (see also Recital 43 of the Marine Strategy Framework Directive).
- 184.** All of the qualitative descriptors are potentially relevant when estimating the baseline condition and measuring the adverse change or impairment of natural services. In addition, the characteristics, pressures and impacts, as listed in Annex III to the Marine Strategy Framework Directive, as well as the 'criteria elements'¹⁵⁰ and the 'threshold value'¹⁵¹, as defined in Article 2, paragraphs 4 and 5, respectively, of Commission

¹⁵⁰ 'constituent elements of an ecosystem, particularly its biological elements (species, habitats and their communities), or aspects of pressures on the marine environment (biological, physical, substances, litter and energy), which are assessed under each criterion'

¹⁵¹ 'a value or range of values that allows for an assessment of the quality level achieved for a particular criterion, thereby contributing to the assessment of the extent to which good environmental status is being achieved'

Decision (EU) 2017/848 should be taken into account in the individual assessment, as appropriate.

Determination of significance

- 185.** For purposes of remedial measures, adverse changes and impairments will be significant if, in respect of the area or areas of marine water affected, they result in a measurable permanent or interim loss in respect of the status of a qualitative descriptor in conjunction with the indicative list of characteristics, pressures and impacts, by taking account of ‘criteria elements’ and ‘threshold value’, as defined under the Marine Strategy Framework Directive such that the area of marine water affected no longer conforms to the environmental status that would have applied to that area before the adverse change or impairment took effect. To take one descriptor as an example, namely concentration of hydrocarbons spilled into the marine water due to an accident at an offshore oil well, adversely affecting a natural habitat in the area of water affected. The example applies also to the measurable gap between the time when the adverse effects occur and the time when, for the qualitative descriptor concerned, the baseline condition is restored.
- 186.** For adverse effects to be significant, it is not necessary that they result in a change of the environmental status for purposes of the Marine Strategy Framework Directive – although a change from good environmental status to not good environmental status would be an example of a significant adverse effect. In other words, the state of the environment as assessed in Article 8 of the Marine Strategy Framework Directive need not be in good environmental status, it may indeed already be in ‘not good’ status when damage occurred. A further deterioration of that state can also be considered as significant adverse effect for the purpose of the ELD. Measurable change in ecosystems resulting from damaging occurrences which exceed natural fluctuations is already an indication for marine water damage (cf. Article 1(2)(a) of the Marine Strategy Framework Directive, cited above).
- 187.** As Article 8 Marine Strategy Framework Directive serves a different purpose than damage assessment under the Environmental Liability Directive, the scale of the assessment under the Environmental Liability Directive needs to be broken down to measure meaningfully significant effects of a damaging occurrence, serving best the objectives of the latter Directive.
- 188.** Finally, will the significance of the damage also depends on whether the damaging occurrence happened inside or outside of marine protected areas (MPAs), affecting such an MPA, or not. This is relevant as MPAs apply stricter biodiversity conservation requirements within it than outside it.

7. 'Land damage'

- 189.** The definition of 'land damage' is more straight-forward than the definitions of 'damage to protected species and natural habitats' and 'water damage'. In contrast to the latter, it contains no express references to other Union environmental legislation, no cross-references to further definitions related to its material scope, and no specific

exclusions referring to other legislation. There are therefore fewer elements to consider for purposes of developing a common understanding.

Material and geographical scope of land

190. The Directive does not contain any definition of 'land'. However, the references in the definition of 'land damage' to 'in, on or under land' means that the scope not only extends to the surface but the sub-surface of land. Soil is therefore included. This is confirmed by the reference to soil in the first paragraph of Annex II.2, which addresses the remediation of land damage.

191. One distinction of possible relevance concerns the definition of 'groundwater' referred to in Box 8 above. Land contamination and groundwater pollution may often coincide, and a damaging occurrence give rise to land damage and water damage at the same time. It needs to be noted, however, that, in respect of groundwater, water damage does not cover the presence of organisms and micro-organisms. In contrast, these are covered by the notion of land contamination.

192. The terms of the Directive specifying what is meant by protected species, natural habitats and waters all involve geographical qualifications which affect the geographical application of 'damage to protected species and natural habitats' and 'water damage'. In contrast, there are no sub-categories of 'land' to consider. The scope of the definition is uniform for all land in the territory of the Member States.

Reference concept for adverse effects

193. The reference concept for land damage is human health. Adverse effects are only covered when land contamination has the potential to harm human health.

194. 'Human health' is not defined in the Directive. The context indicates that it covers bodily well-being to the extent that this may be harmed by exposure to the contaminants comprised in the definition. These contaminants include toxins and pathogens. Mental well-being may also be covered to the extent that it is also harmed by exposure to the contaminants.

The assessment of significance

Circumstances

195. The reference to 'land contamination' marks a distinction with the definitions of 'damage to protected species and natural habitats' and 'water damage'. Its inclusion limits the possible range of damage factors that will trigger liability for land damage. There is no similar limitation with regard to the other forms of natural resource damage.

196. 'Land contamination' is not expressly defined but is linked in the definition of 'land damage' to 'the direct or indirect introduction, in, on or under land, of substances, preparations, organisms or micro-organisms'.

197. Annex II.2 makes reference to 'contaminants'. This, the use of the term 'contamination' itself, and the link to human health, indicates that, for land damage to arise, there must

be a presence – or the risk of a presence - of 'substances, preparations, organisms and micro-organisms' which have intrinsic properties that may be directly or indirectly harmful to human health. Taking into account the list of occupational activities in Annex III of the Directive, the following may all be potentially relevant:

- Substances naturally present in nature, such as heavy metals and nutrients;
- Substances naturally present in nature, but which may have undergone some form of processing, as will be the case with petroleum products;
- Purely man-made substances and preparations, such as manufactured chemicals;
- Organisms or micro-organisms naturally present in nature, including human pathogens such as Salmonella or E-coli;
- Genetically modified organisms.

198. The nature of the occupational activities set out in Annex III can be of assistance in understanding the circumstances in which land contamination can arise. By way of a non-exhaustive set of examples, the activities indicate that contamination can arise during mining or extraction, processing or manufacture, livestock production, pesticide use, transport of waste and chemicals, and the treatment of waste. The contamination may arise *after* an occupational activity has moved beyond an economic or active phase and entered a phase of after-care. For example, the regulatory requirements attaching to the management of landfills and mining waste facilities extend to post-closure conditions.

199. As for the manner in which contamination arises, the reference to 'the ... introduction, in, on or under land', points to a wide range of possibilities, including the following:

- The contamination may arise from substances found *in situ*. This may be the case where a mining or extraction operation brings to the land surface heavy metals found under the surface and leaves them to rest there in an unsafe manner.
- The contamination may arise from a one-off accident or incident, for example linked to onsite transport of dangerous substances in pipelines or road transport of dangerous goods or polluting goods¹⁵²;
- The contamination may arise from a continuous known or unknown cause (for example, a ruptured pipe that continues to leak dangerous substances).

200. The circumstances in which land damage arises may involve operators having to fulfil parallel obligations to prevent and remediate adverse effects under other Union legislation, and to inform the competent authorities. Provisions of the Industrial Emissions Directive are especially relevant¹⁵³. It is important, nevertheless, to ensure that such parallel obligations are not treated as a substitute for the obligations of the Environmental Liability Directive, since in scope, purpose and results they are not necessarily identical.

¹⁵² See Annex III.7(a) and III.8

¹⁵³ By way of examples: Article 7 of the Industrial Emissions Directive obliges operators to inform the competent authorities of incidents and accidents and to take preventive measures; Article 8 of the same directive obliges operators to inform the authorities or non-compliance and to take preventive measures, while also providing for possible suspension of the operational activity.

Focus and carrying out of the assessment

- 201.** The assessment of the significance of land damage relates to the risk of human health being adversely affected. It is an assessment of whether that risk is significant.
- 202.** While the definition of 'land damage' does not itself define how the risk is to be assessed, Annex II.2 of the Directive on the remediation of land damage gives clear indications of what the risk assessment needs to cover in situations where the land contamination has already arisen. It may be noted that, with regard to land damage, remediation is an expression of the principle of rectification at source.

Box 14: Text of Annex II.2 of the Directive on the remediation of land damage.

'The necessary measures shall be taken to ensure, as a minimum, that the relevant contaminants are removed, controlled, contained or diminished so that the contaminated land, taking account of its current use or approved future use at the time of the damage, no longer poses any significant risk of adversely affecting human health. The presence of such risks shall be assessed through risk-assessment procedures taking into account the characteristic and function of the soil, the type and concentration of the harmful substances, preparations, organisms or micro-organisms, their risk and the possibility of their dispersion. Use shall be ascertained on the basis of the land use regulations, or other relevant regulations, in force, if any, when the damage occurred.

If the use of the land is changed, all necessary measures shall be taken to prevent any adverse effects on human health.

If land use regulations, or other relevant regulations, are lacking, the nature of the relevant area where the damage occurred, taking into account its expected development, shall determine the use of the specific area.

A natural recovery option, that is to say an option in which no direct human intervention in the recovery process would be taken, shall be considered.'

- 203.** While the definition of 'baseline condition' relates to all natural resources and their services, it provides limited assistance for the purpose of assessing the significance of the risk to human health. Where there is an imminent threat of land damage occurring, but land contamination has not yet actually occurred, the baseline condition may be relevant for purposes of measuring the risks to human health that could arise without preventive measures. Where contamination is in the process of occurring, the baseline condition may similarly be relevant for purposes of measuring the risks to human health that could arise if the factors causing the contamination are not immediately managed. When it comes to remediation of land damage, however, the purpose of the Directive is to remove any significant risk to human health rather than restore the land to the condition it was in before contamination. Such restoration may, of course, be appropriate or necessary in some situations in order to address the human-health risk. It may be noted that the Industrial Emissions Directive requires operators of permitted

facilities to prepare a baseline report¹⁵⁴. Apart from its role under the Industrial Emissions Directive, this baseline report may provide valuable information for purposes of addressing land damage under the Environmental Liability Directive.

204. As Annex II.2 of the Directive shows, a key consideration is the current or approved future use of the land concerned at the time of the damage, since this will affect likely human exposure to the relevant contaminants. The temporal dimension is important. For example, land damage may concern land not currently used for human habitation but intended for future habitation. The intended future land-use needs to be factored into the assessment of significance. Annex II.2 indicates that use is to be ascertained by reference to existing land use or other regulations where these exist.

205. It is important to note the reference to land-use change in the second paragraph of Annex II.2. This is not time-bound. It continues to have relevance after the initial risk assessment takes place. It is possible, for example, that at the time of risk assessment, current and approved future land uses involve limited human exposure to the relevant contaminants, but that, at a subsequent point of time, the land-use changes in a manner that increases the level of human exposure. Disused industrial land previously contaminated by an Annex III occupational activity may be approved for a residential development, for instance. In such circumstances, there is an ongoing obligation on Member States to prevent adverse effects arising from the contamination. An updating of the risk assessment cannot therefore be excluded in the context of the necessary remedial measures.¹⁵⁵ It is advisable that this is made known to authorities with competence to approve land-use changes in respect of contaminated land.

206. Annex II.2 refers to the use of risk-assessment procedures, and refers to a number of matters to be taken into account with regard to the *presence* of the risk:

- *The characteristics and function of the soil.* Soil characteristics may have an influence on risk. For example, porous soils may be more likely to transfer pathogens present in waste-water to groundwater or surface water. The soil may serve or be intended to serve relevant functions. In the case of an individual appropriate system for treating waste-water, for instance, the soil may be intended to purify waste-water discharges – i.e. render the contaminants they contain harmless - before they reach a water body. In the case of a landfill or other waste disposal site, surface soil may serve to seal in waste materials underneath and reduce the risk of their dispersion;
- *The type and concentration of the harmful substances, preparations, organisms or micro-organisms.* This reference relates to the specific contaminants present in the contaminated land. It is necessary not only to know what these are, but also to know their specific risks. A toxicity risk associated with heavy metals will be quite distinct from an infectious disease risk associated with a pathogen. Furthermore,

¹⁵⁴ Article 22, Industrial Emissions Directive. The Commission has prepared guidance on the preparation of the baseline report. See European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions, 2014/C 136/03

¹⁵⁵ Article 6(1)(b) of the Directive.

risk must be considered in terms of the possible different exposure routes – for example, dermal contact, ingestion via hand-to-mouth contact, and consumption of contaminated food or water. For food and water, there may be applicable standards that can be used to assess the risks – for example, the mandatory drinking water standards found in the Drinking Water Directive.¹⁵⁶ In addition, there are no excluded categories of persons: the exposure of workers on the contaminated land, neighbours and members of the public at large must all be considered.

- *The risk and the possibility of their dispersion.* Dispersion may occur through the soil itself, as where contaminants enter the food-chain through cultivation of plants or raising of livestock on the contaminated land. Dispersion may also involve another environmental medium, i.e. air or water. This will be the case, for example, where toxic dust blows from contaminated land, passes through the air, and is deposited on neighbouring human habitations, or on agricultural land (once again creating a possibility of human exposure through the food-chain). It will also be the case, for example, when pathogens present in a waste-water treatment system pass through the soil into groundwater to reach a well that is used to abstract water for human consumption. As previously noted, water damage does not cover adverse effects that involve organisms or micro-organisms. Such adverse effects are, however, potentially within the scope of land damage if land contamination leads to dispersion of the organisms and micro-organisms to water and thereby exposes human beings to a health risk.

207. The UNEP Guidance on the management of contaminated sites¹⁵⁷ shows how risk assessments can be used, how risk assessments are generally carried out and decisions are made.¹⁵⁸

¹⁵⁶ Directive 98/8/EC

¹⁵⁷ UNEP/MC/COP.3/8/Rev.1

- ¹⁵⁸ Risk assessment can be used to help define remediation or management objectives for a site, such as
 - (a) to reach the maximum acceptable limits established by national or local legislation or relevant authorities or
 - (b) to reach specific risk-based limits set for the site on the basis of the assessment. In order to support justified risk-based decision-making and sustainable risk management, a site-specific assessment that relies on a well-defined CSM (i.e., source-pathway-receptor linkage) and takes into account local site conditions and background values could be regarded as a primary tool for determining the need for risk management actions.
- Risk assessment is generally carried out in four clearly defined stages with specific objectives in order to identify hazards, dose and risk relationships, and to measure the magnitude of exposure to determine the risk level and estimated impact on the exposed receptors:
 - (a) Identification and characterization of the scope (e.g., extent of contamination, proximity to human populations, depth to groundwater, proximity to surface water or sensitive habitats): The risk assessment may target the effects on human health, terrestrial animals and aquatic biota of contaminants. Human health will often be the priority. The scope of a risk assessment is determined by site-specific needs.
 - (b) Analysis of the hazard level and toxicity: The hazards of some contaminants are well recognized, with extensive scientific information available on their effects.
 - (c) Analysis of exposure: The goal is to estimate the rate of contact between the identified contaminants and humans or the environment. The analysis is based on a description of actual and possible exposure scenarios, as well as characterization of the nature and extent of the contamination. This may involve exposure measurements such as testing of water supplies, locally grown food, seafood, and human scalp hair and urine. Measurements of contaminant levels in sediments and fish and other biota can identify potential ecologic effects.
 - (d) Analysis of risks: The results of the previous stages are combined to objectively estimate the probability of adverse effects on the protected elements under the specific conditions of the site.

Following assessment of a contaminated site, decisions are made on the most appropriate means of managing the risks presented by the site. Such decisions can be taken at the national, regional or local level or, in certain circumstances, by landowners or other entities. The objective for managing the risks should be agreed in advance of action and should be consistent with the objective to protect human health and the environment from the anthropogenic emissions and releases of contaminants. The requirements for contaminated site management may be set out in national or local legislation and policies

The determination of significance

- 208.** The focus of the determination is the human-health risk posed by the contaminated land – or, for purposes of preventive measures and measures to immediately manage damage factors, of land threatened with contamination or increased contamination.
- 209.** For purposes of preventive measures and measures to immediately manage damage factors, the risk of human health being adversely affected will be significant if there is any reasonable doubt that, without such measures, there will be a measurable possibility of human beings being directly or indirectly exposed to the contaminants to an extent that is harmful to their health.
- 210.** Similarly, for the purpose of remedial measures, the risk of human health being adversely affected will be significant if there is any reasonable doubt that, without such measures, there will be a measurable possibility of human beings being directly or indirectly exposed to the contaminants to an extent that is harmful to their health.
- 211.** The determination of significance does not require that the risk will have manifested itself in actual harm, or that there is an established causal link between the risk and a possible manifestation of the risk. Actual harm to human health does not need to be shown for the definition of land damage to apply; nor does it need to be shown that, through dispersion, the risk has already manifested itself in contamination of another environmental medium such as water. Thus, if an individual waste-water treatment system poses, by reason of defective design, location or operation, a measurable risk of human pathogens passing through the soil to reach an already contaminated drinking water source, the definition of land damage will apply without the need to prove a causal link between that deficient treatment system and actual pollution of the well.

8. Conclusions

- 212.** These Guidelines draw attention to the range of adverse effects encompassed in the definition of environmental damage. This range, combined with the range of occupational activities and damage factors that may be linked to adverse effects, imply that competent authorities will often need to have access to specialist knowledge, including expert judgment, in order to assess the significance of adverse effects. To the extent that relevant specialist knowledge is distributed across different administrative authorities and knowledge centres (as is often the case), effective inter-agency co-operation is important.
- 213.** Furthermore, the Guidelines underscore the extent of the legal, technical and scientific considerations that may come into play when competent authorities are assessing the significance of adverse effects or otherwise ensuring fulfilment of duties to prevent adverse effects, immediately manage damage factors or take remedial measures. Means whereby competent authorities and stakeholders can address the associated challenges include appropriate professional training and sharing of best practices. To assist

Member States, the Commission has made training materials available and it will keep these under review, including in the light of developments in the case-law of the Court of Justice (https://curia.europa.eu/jcms/jcms/j_6/en/). To the same end, the Commission has supported work by the European Union Network for the Implementation and Enforcement of Environmental Law (IMPEL) on practical aspects of the Directive's implementation.

Annex 1

List of decisions of the Court of Justice referred to in the Guidelines

Case C-157/89, *Commission v Italy*

Case C- 3/96, *Commission v Netherlands*

Case C-374/98, *Commission v France*

Case C-494/01, *Commission v Ireland*

Case C-209/02, *Commission v Austria*

C-378/08, *Raffinerie Mediterranee (ERG) SpA and others*

Case C-258/11, *Sweetman*

Case C-535/13, *Fipa Group and others*

Case C-104/15, *Commission v Romani*

Case C-529/15, *Folk*

Case C-129/16, *Túrkevei Tejtermelő Kft*

C-411/17, *Inter-environnement Wallonie*

C-535/18, *IL and Others v Land Nordrhein-Westfalen*

Case C-15/19, *AMA*

Case C-297/19, *Naturschutzbund Deutschland — Landesverband Schleswig-Holstein eV*

Case C-477/19, *IE v Magistrat der Stadt Wien*