

Environmental liability and nature protection areas Will the EU Environmental Liability Directive actually lead to the restoration of damaged natural resources?

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1. Introduction

In 2004, the European Union adopted an Environmental Liability Directive (2004/35/EC). At first glance, environmental liability has little or no connection with protected areas. However, in spite of its name, the EU Environmental Liability Directive (ELD) does not establish a civil liability regime. It imposes an administrative law regime aimed at the prevention and remedying of environmental damage to natural resources.¹ The prevention and remedying of environmental damage is to be implemented through the furtherance of the ‘polluter pays’ principle.² The person who has caused environmental damage is liable for all costs related to the preventive and remedial actions taken pursuant to the ELD.³ The name of the ELD is derived from that fundamental principle. Many publications on the ELD analyse the liability system and the implementation issues it raises.⁴ This article focuses on the applicability and effectiveness of the ELD in respect of the restoration of affected natural resources. The article is structured as follows.

The definition of environmental damage in Article 2 of the ELD includes damage to protected species and natural habitats. Remedial action is required if the damage to these natural resources meets the threshold criteria in Article 2.⁵ In order to finance the restoration of environmental damage to natural resources it might be crucial that the damage meets the threshold criteria which can be derived from Article 2 of the ELD.

The complex definition of environmental damage will be discussed in Section 2. The definition of damage in Article 2(2) of the ELD requires measurable data to provide conclusive evidence of damage. Section 3 discusses the issue of the availability of measurable data. If conclusive evidence of damage is provided and the damage meets the criteria in Article 2 of the

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1 See Article 1 of the ELD (2004/35/EC). See L. Bergkamp, ‘The Proposed Environmental Liability Directive’, 2002 *European Environmental Law Review*, p. 329; L. Bergkamp, ‘Implementation of the Environmental Liability Directive in EU Member States’, 2005 *ERA-Forum*, no. 3, pp. 389-390.

2 See Paragraph 2 of the Preamble to the Directive.

3 See Articles 2(16) and 8(1) of the ELD.

4 See L. Bergkamp, ‘The Proposed Environmental Liability Directive’, 2002 *European Environmental Law Review*, pp. 294-314 and 327-341; G. Betlem, ‘Scope and Defences of the 2004 Environmental Liability Directive: Who is Liable for What?’, 2005 *ERA-Forum*, no. 3, pp. 376-388; G. Winter *et al.*, ‘Weighing up the EC Environmental Liability Directive’, 2008 *Journal of Environmental Law*, no. 2, pp. 163-191.

5 See Articles 5 and 6 of the ELD.

ELD, the potential remedial measures are to be identified in accordance with Annex II of the ELD.⁶ As stated above, the person who has caused environmental damage is liable for all costs related to the preventive and remedial actions.⁷ Section 4 aims to answer the question of which costs can be recovered. The answer to this question might be important since the cost of implementing a potential remedial option is one of the criteria for the selection of remedial measures listed in Annex II. Annex II to the ELD sets out a framework to be followed in order to identify the most appropriate remedial measures. The identification of remedial measures will be discussed in Section 5.

The complex definition of environmental damage, the difficulties in providing conclusive evidence of damage and the significance of the costs in selecting remedial measures give rise to the question whether the ELD will actually lead to the restoration of affected natural resources. This research question will be answered in Section 6.

2. The definition of environmental damage

2.1. *Damage to protected species and habitats*

In Article 2(1) of the ELD the definition of environmental damage is subdivided into three categories: damage to protected species and natural habitats, water damage and land damage. This article will focus on damage to protected species and natural habitats. Damage to protected species and natural habitats is defined as ‘any damage that has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species’.⁸

Article 2(3) of the ELD defines protected species and natural habitats as:

- ‘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/EE; and
- c. (...).’

Remarkably, the scope of the ELD is not restricted to the Natura 2000 network.⁹ The definition of damage to species includes not only the species which occur in designated Special Protection Areas (SPAs) under the EU Birds Directive or species in designated Special Areas of Conservation (SACs) under the EU Habitats Directive. The species mentioned in Article 2(3) ELD which occur outside the SACs and SPAs and even migratory species are also included. Likewise, the definition of damage to habitats includes not only habitats of species and types of natural habitats occurring within SACs or SPAs. The definition also includes all other sites hosting a habitat listed in one of the annexes to the EU Habitats or Birds Directive mentioned in Article 2(3) of the ELD. This means, for example, that the ELD includes habitats of species and types of natural

6 See Article 7(1) of the ELD.

7 See note 3, *supra*.

8 See Article 2(1)(a) of the ELD.

9 Natura 2000 is a Community-wide network of nature protection areas established under the EU Habitats Directive. It also includes areas designated under the EU Birds Directive. The aim of the network is to assure the long-term survival of Europe’s most valuable and threatened species and habitats. See Commission working document on Natura 2000, December 2002. This document can be viewed at <<http://ec.europa.eu/environment/nature/natura2000>>.

habitats mentioned in the EU Habitats Directive that do not meet the criteria for designation as a SAC. Also, the ELD applies to habitats which are eligible for designation when Member States have failed to designate the habitats in good time.¹⁰

Thus, the ELD offers a minimum level of protection to the areas which are included in the damage definition in Article 2 of the ELD but are not designated as a SPA or SAC under the Birds and Habitats Directive. Although the obligations of Article 6 of the Habitats Directive do not apply to these areas, remedial measures are required in the case of environmental damage.¹¹

However, the protection which the ELD provides might indeed be minimal, since the definition of damage to protected habitats and species imposes a high threshold. Not all adverse effects on the condition of a habitat or species prior to the harmful incident are covered, only significant adverse effects on reaching or maintaining the favourable conservation status of the affected habitat or species.

2.2. Threshold criteria

The threshold criteria can be derived from Article 2 of the ELD. Article 2(1) stipulates that the significance of the adverse effects on the favourable conservation status of habitats and species included in the ELD is to be assessed with reference to the baseline condition, taking account of the criteria set out in Annex I. Article 2(14) of the ELD defines the baseline condition as ‘the condition at the time of damage of the natural resources and services that would have existed had the damage not occurred estimated on the basis of the best information available’.¹² Article 2(2) defines damage as ‘a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly (...)’. In combination, the damage definitions in Article 2 of the ELD contain the following threshold criteria:

1. a measurable adverse change in a natural resource or measurable impairment of a natural resource service in relation to the baseline condition,
2. which has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species.

2.3. The baseline condition

In order to determine whether the damage caused by a harmful incident meets the threshold criteria, the first step is to make a comparison. The condition of the affected species and habitats after the harmful incident has occurred is to be compared with the situation at the time of damage that would have existed, had the damage not occurred (the baseline condition). The baseline condition is a hypothetical situation. Only the incident causing the damage is to be left out, all other factors are to be taken into account. The comparison with this hypothetical situation is generally considered to be inherent in any definition of damage.¹³ In my opinion this means that natural fluctuations for the affected natural resources or other negative variations due to natural

10 See E. Brans, ‘De EU-Richtlijn Milieuaansprakelijkheid’, 2005 *Bouwrecht*, pp. 14-28; P. Wenneras, ‘A progressive interpretation of the Environmental Liability Directive in Conformity with EC Law’, in: R. Mellenbergh (ed.), *Aansprakelijkheid voor schade aan de natuur*, 2005, pp. 141-142; Ch. Backes *et al.*, *Reikwijdte van de richtlijn milieuaansprakelijkheid*, 2005, pp. 11-22.

11 See Section 2.4, *infra*.

12 See Wenneras, *supra* note 10, pp. 139-140.

13 Cf. F. Mommsen, *Beiträge zum Obligationenrecht II, Zur Lehre von dem Interesse*, 1855, p. 3; A. Bloembergen, *Schadevergoeding bij onrechtmatige daad*, 1965, pp. 9-18.

causes that have an effect on the natural resources have to be taken into account when determining the baseline condition.¹⁴

Article 2(1)(a) stipulates that the significance of the adverse effects on reaching or maintaining the favourable conservation status is to be assessed with reference to the baseline condition, taking the criteria set out in Annex I into account. Annex I provides that significant adverse changes to the baseline condition should be determined by means of measurable data such as:

- ‘– 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 the local, regional and higher level including at the 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.’

2.4. Favourable conservation status

Although the scope of the ELD is not restricted to the Natura 2000 network, the definition of damage to protected species and natural habitats is clearly tailored to it. For example, the definition of favourable conservation status in Article 2(4) is taken from the Habitats Directive (Article 1). Article 2(4) of the ELD defines conservation status in respect of a natural habitat as ‘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 (...)’. 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, (...)’¹⁵

Conservation status in respect of a species is defined as ‘the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations (...)’. 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

¹⁴ See REMEDE, *Deliverable no. 5: Legal Analysis*, 30 November 2006. This document can be viewed at <www.envliability.eu>. See E. Brans, ‘Het wetsvoorstel tot implementatie van de EU richtlijn Milieuaansprakelijkheid (2204/35/EG)’, 2007 *M&R*, p. 539.

¹⁵ Article 2(4)(a).

- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis;¹⁶

The Commission describes the favourable conservation status in simple terms as ‘a situation where a habitat type or species is prospering in both quality and extent/population and with good prospects to do so in the future as well’.¹⁷ The concept of conservation status is first developed in the context of the IUCN Red Lists of threatened and endangered species. It is an assessment of the long-term viability of a habitat or species. In the context of the EU Habitats Directive the concept of favourable conservation status requires more than avoiding extinctions, the objective of the Habitats Directive is defined in positive terms.¹⁸ Article 6(1) of the Habitats Directive requires Member States to establish conservation measures for Natura 2000 sites aimed at reaching and maintaining the favourable conservation status of the natural habitat types and species of Community interest.¹⁹

The definition of damage to species and habitats in Article 2(4) of the ELD requires identifying the favourable conservation status of the affected species and habitats. The definitions of favourable conservation status give a general orientation as to the parameters which are to be used when defining and assessing the favourable conservation status. In respect of a species the parameters range, population, suitable habitat and future prospects are to be used and in respect of a habitat the parameters range, area, structure & functions and future prospects are to be used.²⁰ Although the parameters are well defined, the assessment and monitoring of the (favourable) conservation status of species and habitats is very complex.

The obligations of Article 6(1) of the Habitats Directive to establish conservation measures aimed at reaching favourable conservation status do not apply to the habitats and species included in the ELD which occur outside the Natura 2000 network. In this regard the Commission’s statement that the concept of favourable conservation status is not limited to the Natura 2000 network is interesting. The Commission states:

‘From the viewpoint of DG Environment, and confirmed by legal advice, the Habitats Directive *as a whole* with all instruments it provides for has the objective to reach favourable conservation status for all habitats and species listed in the annexes of the directive. This is spelled out in its Article 2.2. However for Annex I habitats and for species only listed on Annex II the Natura 2000 Network is the only mechanism required by the directive’.²¹

As stated above, the ELD might be considered as an instrument providing a minimum level of protection to habitats and species listed in the annexes to the Habitats and Birds Directives, which occur in areas outside the Natura 2000 network. Member States are not under an obligation to take necessary conservation measures aimed at reaching or maintaining the favourable conserva-

16 Article 2(4)(b).

17 See European Commission, *Note to the Habitats Committee*, DocHab-04-03/03 rev. 3, p. 4. This document can be viewed at the CIRCA Platform ‘Reporting and the nature directives’.

18 See European Commission, *Assessment, monitoring and reporting under Article 17 of the Habitats Directive: Explanatory Notes & Guidelines*, Final Draft, October 2006, p. 15. This document can be viewed at the CIRCA Platform ‘Reporting and the nature directives’. More information on IUCN is available at <www.iucnredlist.org>.

19 See European Commission, *Managing Natura 2000 sites*, pp. 16-17. This document can be viewed at <<http://ec.europa.eu.environment>>.

20 See ETC-BD, Background Document entitled *Article 17 Reporting, Consultation on the Conservation Status of Habitats & Species*, June 2008, p. 3. This document can be viewed at the CIRCA Platform ‘Reporting and the nature directives’.

21 See European Commission, *supra* note 17, p. 5.

tion status for these habitats and species. Furthermore, for habitats and species occurring outside the Natura 2000 network, the favourable conservation status is neither determined nor specified in conservation objectives. Neither do the obligations of Article 6(3) and (4) of the Habitats Directive apply.²² However, when developments included in Article 3 of the ELD cause damage having significant adverse effects on reaching or maintaining the favourable conservation status of habitats or species occurring outside the Natura 2000 network, the ELD requires preventive or remedial measures.

2.5. Significant damage

Annex I to the ELD stipulates that 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 with 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.

Annex I stipulates explicitly that damage with a proven effect on human health must be classified as significant damage. Apparently, this ‘significant damage’ is considered to be included in the definition of damage to protected species and natural habitats.

Not classified as significant damage are:

- ‘ – 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.’

Apparently, damage not classified as ‘significant damage’ is not covered by the ELD. Annex I makes clear that damage is not covered by the ELD if the adverse effects on the condition of a habitat or species are only temporary. Prima facie evidence is required that the damage exceeds the natural fluctuations or negative variations due to natural causes and that it is not established that the species or habitats will recover within a short time and without intervention. In practice, it appears to be very difficult to provide this prima facie evidence, since accurate and detailed historical data are often not available.²³

Thus, the ELD imposes a high threshold. The question arises in how many cases this threshold will actually be exceeded. For instance, Dutch research has shown that in the Netherlands the threshold for damage to habitats and species is not likely to be exceeded in many cases.²⁴ Furthermore, the provisions in Annex I concerning the classification of significant damage raise the question whether in all cases sufficient data are available to enable the competent authority to assess the significance of the damage.

22 Art. 6(3) requires an assessment to be made of the implications for a Natura 2000 site, before allowing a project or a plan which is likely to have significant effects. Art. 6(4) requires compensatory measures if a plan or project is to be carried out in spite of a negative assessment of the implications for the Natura 2000 site.

23 See Backes *et al.*, *supra* note 10, pp. 11-22.

24 *Ibid.*, pp. 41-42.

3. Availability of measurable data

Article 2(2) defines damage as ‘a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly (...)’. In combination with Article 2(1) damage to protected species and natural habitats is defined as ‘any measurable adverse change that has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species’. Although Article 2(14) of the ELD stipulates that the baseline condition is to be estimated on the best information available, an adverse change can only be measured in cases where accurate information concerning the condition of the affected natural resource prior to the harmful event is available. The question arises whether in all cases such information is available. The reconstruction of the baseline condition could become disputable in cases where accurate measurable data are not available and the baseline condition is estimated on the basis of general, dated, incomplete or unreliable data. The definition of baseline condition permits the use of whatever information is the ‘best available’ even if that information does not meet quality standards.²⁵

It is likely that most available data concern the Natura 2000 network. Article 4(1) of the Habitats Directive requires Member States to submit a list of proposed Natura 2000 sites together with information on each site. This information is provided on a Standard Data Form (97/266/EC). This Standard Data Form will also be used for sites designated as SPAs under the Birds Directive.²⁶ The information contained in Standard Data Forms will provide a minimum level of information for all Natura 2000 sites.²⁷

On a national level, more accurate information could be available in management plans and monitoring reports. For the applicability of the ELD it is important that monitoring reports provide measurable data on the current conservation status of a designated site. With regard to the assessment of environmental damage it is crucial that detailed, specific and accurate information is available on the parameters used to assess the conservation status. Without accurate information on the conservation status prior to a harmful incident it will be difficult to prove that an adverse change has taken place. It will be even more difficult to provide *prima facie* evidence that an incident has significant adverse effects on reaching or maintaining the favourable conservation status. It will have to be made plausible that the damage exceeds natural fluctuations or negative variations due to natural causes and that the species or habitats will not recover within a short time and without intervention.

Unless there is an obligation under national law to establish management plans or monitoring reports, less information will be available on the (favourable) conservation status of sites hosting species or habitats covered by the ELD that are not designated as a SAC or SPA under the Habitats or Birds Directive.²⁸ In this respect Article 11 of the Habitats Directive is relevant, requiring the monitoring of the conservation status of the natural habitats and species referred to in Article 2 of the Habitats Directive. The Commission states that this provision is not restricted to Natura 2000 and data need to be collected both within and outside the Natura 2000

25 L. Bergkamp, ‘The European Environmental Liability Directive and its Effects on Industry and the Economy’, in: R. Mellenbergh (ed.), *Aansprakelijkheid voor schade aan de natuur*, 2005, p. 117.

26 Natura 2000 Standard Data Form (97/266/EC), explanatory notes, p. 3. Article 4(3) of the Birds Directive requires Member States to send the Commission all relevant information so that it may take appropriate initiatives with a view to the coordination which is necessary to ensure that the areas provided for in Paragraphs 1 and 2 form a coherent whole which meets the protection requirements of these species in the geographical sea and land area where the Birds Directive applies.

27 MacAlister Elliott and Partners Ltd *et al.*, *Study on the valuation and restoration of damage to natural resources for the purpose of environmental liability*, 2001, pp. 8-9.

28 See Backes *et al.*, *supra* note 10, pp. 11-22.

network. Thus, for habitats and species which also occur outside the Natura 2000 sites, information from outside the designated sites is required. The results of this monitoring have to be reported to the Commission every six years according to Article 17 of the Habitats Directive.²⁹ These monitoring reports will be important data sources for the assessment of environmental damage under the ELD. The practical applicability of the ELD will largely depend on the quality and accuracy of the information gathered under the reporting requirements of the Habitats and Birds Directives.

Since the availability of measurable data could be an issue, it is important to determine how much evidence is required and who bears the burden of proof. In the first place, anyone who makes allegations of damage should provide some reasonable supporting evidence that the allegations are founded.³⁰ For instance, if a natural or legal person referred to in Article 12 of the ELD submits to the competent authority a request for action, Article 12(2) requires the request to be accompanied by the relevant information and data supporting the observations submitted in relation to the environmental damage in question. Only where the request for action and the accompanying observations show in a plausible manner that environmental damage exists will the competent authority consider any such observations and requests for actions (Article 12(3)). The requirement to collect and submit information might impose a high threshold for natural or legal persons to submit a request for action.³¹ However, it could be stated that the information submitted regarding such a request should not be subject to requirements which are too strict. After all, Article 11(2) stipulates that the duty to assess the significance of the damage rests with the competent authority. To that effect, the competent authority shall be entitled to require the relevant operator to carry out his own assessment and to supply any information and data which may be necessary.

4. Recoverable costs

If conclusive evidence of damage or an imminent threat of damage is provided and the operator has not yet taken (sufficient) preventive or remedial measures himself, the competent authority requires the operator to take all necessary preventive or remedial measures, pursuant to Article 5(3)(b) and (4) and Article 6(2)(c) and (3) of the ELD.

However, Articles 5(1) and 6(1) of the ELD primarily require the person who has caused the environmental damage to take the necessary preventive and remedial measures. The competent authority is not under an obligation to take preventive or remedial measures itself. Pursuant to Article 5(3)(b) and (4) and Article 6(2)(c) and (3) the competent authority is only obliged to require the operator to take the necessary preventive or restoration measures. In that case the restoration measures will be financed directly by the operator, so the recovery of the costs will not be necessary. Contrary to the Commission's Proposal, the Directive does not require public authorities to take restoration measures in cases where the 'polluter pays' principle cannot be applied (so-called orphan damages). Articles 5(4) and 6(3) assign only discretionary powers to the competent authorities; there is no obligation to take restoration measures in cases where the costs cannot be recovered from the operator.

29 See European Commission, *supra* note 17, p. 2; European Commission, *supra* note 18, pp. 4-5.

30 See European Commission, *Frequently Asked Questions on the Commission's Proposal on Environmental liability*, MEMO/02/10, 24/02/2002.

31 See L. Krämer, 'De positie van de milieuorganisaties als gevolg van de Richtlijn Milieuaansprakelijkheid', in: R. Mellenbergh (ed.), *Aansprakelijkheid voor schade aan de natuur*, 2005, p. 79.

Article 8(1) provides that the operator shall bear the costs of the preventive and remedial actions taken pursuant to the Directive. Article 8(2) stipulates that the competent authority shall recover the costs it has incurred in relation to preventive and remedial actions from the operator who had caused the damage or the imminent threat of damage. Article 2(16) defines costs as ‘costs which are justified by the need to ensure the proper and effective implementation of this Directive including the costs of assessing environmental damage or an imminent threat, alternatives for actions as well as the administrative, legal, and enforcement costs, the costs of data collection and other general costs, monitoring and supervision costs’. Apparently, the operator is liable for all costs related to remedial and preventive measures taken pursuant to the Directive. The Directive explicitly prefers to assess the damages by calculating the costs of remediation, not only in the case of primary remediation, but also in cases where complementary and compensatory measures are taken.³² The advantage of assessing damages on the basis of the costs of remediation is that these costs are easier to estimate and are verifiable *ex post*. The disadvantage is that restoration costs can only be determined in cases where the damage is not irreparable. The Directive addresses this problem by defining remedial measures in Article 2(11) as ‘any action or combination of actions including mitigating or interim measures to restore, rehabilitate or replace damaged natural resources and/or impaired services, or to provide an equivalent alternative to those resources or services as foreseen in Annex II’. This means that, in case primary restoration is not feasible (technically or financially), complementary measures may be taken.³³ In that case, the damages are assessed on the basis of the costs of the complementary actions.

In this context it is relevant to note that the amount of the damages is not limited. Unlike other international liability systems³⁴ the ELD does not provide that only reasonable costs are recoverable. This means that in principle all justified costs may be recovered.

The Whitebook and the Commission’s proposal emphasized that disproportionate costs of restoration should be avoided. The Whitebook proposed that a cost-benefit or reasonableness test would have to be undertaken in each separate case.³⁵ The explanatory memorandum to the Commission’s Proposal stated that explicit preference is given to the least-cost option, amongst alternatives likely to deliver similar environmental benefits (cost-effective approach).³⁶ The ELD does not refer directly to a cost-benefit or a cost-effectiveness analysis but Annex II to the ELD offers several options to avoid unreasonable costs.³⁷

5. Identification of remedial measures

Article 7(1) requires the operator to identify, in accordance with Annex II, the potential remedial measures and to submit them to the competent authority for its approval. A keynote aspect of the ELD is that the operator takes the initiative in selecting potential remedial measures although the competent authority takes the final decision as to which remedial measures shall be implemented (Article 7(2) of the ELD).

Annex II sets out a framework to be followed in order to determine which measures are the most appropriate to ensure the remedying of environmental damage. The approach in Annex II

32 The various remedial options are discussed in Section 5, *infra*.

33 See European Commission, *Explanatory memorandum to the Commission’s proposal*, COM(2002) 17 final, Ch. 4. *Cf.* Section 5, *infra*.

34 See E. Brans, *Liability for damage to public natural resources*, 2001, Ch. 7.

35 See European Commission, *White Paper on Environmental Liability*, COM(2000) 66 final, Section 4.5.1.

36 See European Commission, *supra* note 33.

37 See Section 5, *infra*.

resembles the methods for the assessment of damages in the USA under the Oil Pollution Act and CERCLA.³⁸

Annex II provides for three kinds of remedial measures in relation to protected species or natural habitats. Paragraph 1 of Annex II stipulates that the remedying of environmental damage in relation to protected species or natural habitats is achieved through the restoration of the environment to its baseline condition, by way of primary, complementary and compensatory remediation.

Pursuant to Paragraph 1 of Annex II remedial measures should not only concern the affected natural resources, but also the impaired services or natural resource services. Likewise, the definition of baseline condition in Article 2(14) includes the services which the natural resource provides. Services or natural resource services are defined in Article 2(13) as: ‘the functions performed by a natural resource for the benefit of another natural resource or the public’. This definition includes services contributing to human well-being such as recreational services (swimming, hiking, recreational fishing etc.).

It follows from Paragraph 1 of Annex II that the recovery of the affected natural resources is not required in all circumstances. Paragraph 1 of Annex II does not require restoring the *affected natural resources* to the baseline condition but requires restoring the *environment* to its baseline condition. This is confirmed by Article 2(11) of the ELD that defines remedial measures as: ‘any action, or combination of actions, including mitigating or interim measures to restore, rehabilitate or replace damaged natural resources and/or impaired services, or to provide an equivalent alternative to those resources or services as foreseen in Annex II’. Annex II allows the environment to be restored to its baseline condition by providing an *equivalent alternative to the affected natural resources or services*. Thus, the Directive implements a sort of ‘compensation principle’.³⁹

5.1. Primary remediation

Paragraph 1(a) of Annex II defines primary remediation as ‘any remedial measure that returns *the damaged natural resources and/or impaired services* to or towards baseline condition’. The purpose of primary remediation is defined as the restoration of damaged natural resources and/or services to or towards their baseline condition (Annex II, Paragraph 1.1.1). Paragraph 1.2.1 of Annex II contains two options for primary remediation: actions to directly restore the natural resources and services towards their baseline condition on an accelerated time frame, or remediation through natural recovery. Primary remediation involves actions such as the removal of spilt materials. The return to the baseline condition may be slow through natural recovery or accelerated by intensive remediation measures.

5.2. Complementary remediation

Complementary remediation will be undertaken where the damaged natural resources and/or services do not return to their baseline condition (Annex II, Paragraph 1.1.2). Complementary measures are meant to compensate for the fact that primary remediation does not result in fully restoring the damaged natural resources and/or services (Paragraph 1(a) of Annex II). The purpose of complementary remediation is to provide a similar level of natural resources and/or services as would have been provided if the damaged site had been returned to its baseline

³⁸ See Brans, *supra* note 34, Ch. 4.

³⁹ In the Netherlands there is some case law on the application of the compensation principle. See Ch. Backes, *Juridische bescherming van ecologisch waardevolle gebieden*, 1993, pp. 519-526. See Brans, *supra* note 10, p. 24.

condition (Paragraph 1.1.2 of Annex II). Complementary remediation might consist of a similar level of natural resources and/or services at an alternative site. The crucial question is what criteria are used to determine whether complementary remedial measures provide a similar level of natural resources and/or services. This is discussed in more detail in Section 5.5.

5.3. Compensatory measures

Compensatory measures should be undertaken, in addition to complementary measures, in cases where primary remediation will not result in the restoration of the environment to its baseline condition. Paragraph 1(c) stipulates that compensatory measures will be undertaken to compensate for interim losses of natural resources and/or services that occur from the date of damage until primary remediation has achieved its full effect. This definition implies that where primary remediation is not possible or will not fully achieve the baseline condition, compensatory measures for interim losses will be infinite.

Interim losses are losses which result from the fact that the damaged natural resources and/or services are not able to perform their ecological functions or provide services to other natural resources or to the public until the primary or complementary measures have taken effect. Interim losses may consist of traditional damages such as loss of income, but these traditional damages are not covered by the ELD. Furthermore, individuals may experience a loss of enjoyment of nature if a nature area has become less attractive for recreational use. However, this type of non-pecuniary harm is not recoverable under tort law.⁴⁰ Annex II emphasizes that the compensation of interim losses will not consist of financial compensation to members of the public. Thus, interim losses will only be compensated to the public in natura.

5.4. Choice of the remedial options: considering the costs

Annex II, Paragraph 1.3 provides for the criteria to choose between the various remedial options. It is interesting that not only criteria concerning the restoration of the environmental damage may be taken into consideration, but also other criteria such as the costs of implementing the option, the length of time it will take for the restoration of the environmental damage to be effective, and the extent to which each option takes account of relevant social, economic and cultural concerns and other relevant factors specific to the locality (see Paragraph 1.3.1 of Annex II). Remarkably, Annex II does not require primary remediation to be considered first. Instead, Paragraph 1.3.2 allows primary remedial measures to be chosen that do not fully restore the damaged protected species or natural habitat to its baseline condition or that restore it more slowly, when equivalent natural resources and/or services could be provided elsewhere at lower cost. This decision can only be taken if the natural resources and/or services that were relinquished at the primary site as a result of the decision are compensated by increasing complementary or compensatory actions to provide a similar level of natural resources and/or services as were relinquished. Since there is no hierarchy of selection criteria,⁴¹ Annex II allows significant importance to be attached to the costs of the remedial measures. In practice, complementary and compensatory measures will often be cheaper than primary remedial measures. This means that it is not unlikely that the damaged natural resources will not, or not fully, be restored to the baseline condition, at least not on an accelerated time frame requiring expensive intervention measures. Annex II allows complementary and compensatory measures to be chosen, even if primary remedial measures that restore the damaged species or habitats to the baseline condition are technically feasible.

⁴⁰ See Brans, *supra* note 34, pp. 264-269.

⁴¹ See REMEDE, *supra* note 14, p. 16.

Furthermore, Paragraph 1.3.3 allows a form of cost-benefit analysis in the evaluation of remedial measures. If remedial actions which have already been taken ensure that there is no longer any significant risk of adversely affecting human health, water or protected species and natural habitats, the competent authority is entitled to decide that no further remedial actions should be taken if the cost of remedial measures that should be taken to attain the baseline condition or a similar level would be disproportionate to the environmental benefits to be obtained. Paragraph 1.3.3 requires the decision to be taken in accordance with Article 7(3) of the ELD. Article 7(3) provides that the competent authority shall have regard, inter alia, to the nature, extent and gravity of the environmental damage concerned, as well as to the possibility of natural recovery.

In practice, this means that if the operator has taken actions to ensure that there is no longer any significant risk, no further primary, complementary or compensatory actions have to be undertaken if the competent authority considers that the costs are disproportionate to the environmental benefits. Since Annex II does not provide for a benchmark for the costs, or a method by which to assess the environmental benefits, the competent authority has a wide discretion at this point. In relation to the restoration of damaged species and habitats, the application of Paragraph 1.3.3 may be crucial for the effectiveness of the ELD. The actual restoration of the affected natural resources may be reduced or slowed down enormously by allowing operators to take primary remedial actions to the point where there is no longer any significant risk, rather than to achieve baseline conditions.⁴²

Since the ELD requires operators to take the initiative in identifying potential remedial measures, both competent authorities and national courts will have an important task in determining the reasonableness of the remedial measures that the operator proposes (Article 13 of the ELD).

As noted in Section 4, the amount of the damages is in principle unlimited. Operators are liable for all the costs related to remedial or preventive measures. However, in Paragraph 1.3.2 and 1.3.3 Annex II offers some options to avoid unreasonable costs. Thus, the ELD offers operators some protection against disproportionate claims.

5.5. Identification of complementary and compensatory remedial measures

For the identification of complementary and compensatory remedial measures Paragraph 1.2.2 of Annex II prefers the use of resource-to-resource or service-to-service equivalent approaches. This means that actions providing natural resources and/or services of the same type, quality and quantity as those damaged should be considered first. This involves an analysis of the comparability of resources and services (equivalency methods). Both ecological and recreational services should be compared. The challenge in preparing a restoration plan will be to identify projects providing natural resources and services equal to the relinquished natural resources and services. To support the application of the different methods that can be used the REMEDE Project has been designed.⁴³ Part of the REMEDE Project is a Toolkit that provides an overview of resource equivalency methods in the context of the ELD, the Habitats and Birds Directives and the Environmental Impact Assessment Directive.⁴⁴ In view of the size of the Toolkit identifying complementary and compensatory measures will be a complicated and expensive process.

⁴² See Wenneras, *supra* note 10, p. 149.

⁴³ Resource Equivalency Methods for Assessing Environmental Damage in the EU. More information on REMEDE is available on <www.envliability.eu>.

⁴⁴ See REMEDE, *Deliverable 13, Toolkit for Performing Resource Equivalency Analysis to Assess and Scale Environmental Damage in the European Union*, 31 July 2008. This document can be viewed on <www.envliability.eu>.

Bergkamp has strongly criticized Annex II at this point, by stating inter alia: ‘in practice it will involve numerous discretionary and virtually arbitrary government decisions (...), require high administrative expenditure and turn out to be very inefficient and unworkable’.⁴⁵

The complementary action may consist of the purchase and recreation of an alternative site by improving or creating natural resources and/or services of the same kind.⁴⁶ However, in practice it will be complicated to find a location which is suitable for improving or creating similar natural resources and services as those damaged. Paragraph 1.2.2 of Annex II addresses these problems by stipulating that where providing natural resources and/or services of the same type, quality and quantity is impossible, alternative natural resources and/or services shall be provided. In that case, Paragraph 1.2.2 explicitly allows a sort of trade-off: a reduction in quality could be offset by an increase in the quantity of remedial measures.⁴⁷

5.6. Connection with the Habitats Directive

A relevant provision concerning complementary measures is Article 6(4) of the Habitats Directive, requiring compensatory measures ‘*ex ante*’ in the context of plans or projects significantly affecting Natura 2000 sites. If a plan or project is to be carried out in spite of a negative assessment of the implications for the Natura 2000 site in question, all the necessary compensatory measures shall be taken to ensure that the overall coherence of Natura 2000 is protected. The purpose of compensatory measures in the context of the Habitats Directive is to offset the negative effects of a plan or project and to provide compensation corresponding precisely to the negative effects on the species or habitat concerned.⁴⁸ These compensatory measures are comparable to the complementary measures under the framework of the ELD.⁴⁹ In the context of the ELD complementary measures are taken ‘*ex post*’ to compensate for the fact that primary remediation does not result in fully restoring the damaged natural resources and/or services to the baseline condition. The purpose of complementary remediation is to provide a similar level of natural resources and/or services as would have been provided if the damaged site had been returned to its baseline condition. The experience with compensatory measures in the context of the Habitats Directive can be used as a source of inspiration in the context of the ELD.⁵⁰

The Commission’s Guidance document on Article 6(4) contains criteria for designing compensatory measures.⁵¹ In a nutshell, compensatory measures should ensure the overall coherence of Natura 2000 and should therefore:

1. address, in comparable proportions, the habitats and species negatively affected;
2. provide functions comparable to those which had justified the selection of the original site, particularly regarding the adequate geographical distribution.

The competent authorities should be looking at the criteria for the selection of sites for the Natura 2000 Network when designing the compensatory measures for a project and should ensure that they provide the properties and functions comparable to those which had justified the selection of the original site.

45 See Bergkamp, *supra* note 25, pp. 116-119; Bergkamp, *supra* note 4, pp. 304-305.

46 See REMEDE, *supra* note 44, p. 11.

47 Cf. Wenneras, *supra* note 10, pp. 149-150; MacAlister Elliott and Partners Ltd *et al.*, *supra* note 27, p. 41.

48 See European Commission, *Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC*, January 2007, pp. 10-11.

49 See REMEDE, *supra* note 14, pp. 17-22.

50 *Ibid.*, pp. 17-22. See MacAlister Elliott and Partners Ltd *et al.*, *supra* note 27, Executive Summary.

51 European Commission, *supra* note 48, pp. 10-20.

It could be argued that the criteria for designing compensatory measures in the context of Article 6(4) should also apply to the selection of remedial measures taken in relation to damaged habitats and species occurring within the Natura 2000 Network. This means that remedial measures in relation to damaged habitats and species occurring within a Natura 2000 site should ensure the overall coherence of the Natura 2000 Network, although the remedial measures are established within the framework of the ELD.⁵² In case of damage to a habitat or species occurring within a Natura 2000 site, the extent to which the various remedial options contribute to the restoration of the coherence of the Natura 2000 Network might be a decisive factor, rather than the costs.⁵³

6. Conclusions

The scope of the EU Environmental Liability Directive (ELD) is not restricted to the Natura 2000 network. The definition of damage in Article 2(3) also includes all other sites hosting a species or a habitat listed in one of the annexes to the EU Habitats or Birds Directive mentioned in Article 2(3) of the ELD.

Article 2 of the ELD contains the following threshold criteria for damage to protected species and habitats:

1. a measurable adverse change in a natural resource or measurable impairment of a natural resource service in relation to the baseline condition,
2. which has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species.

The definition of damage to species and habitats in Article 2(4) of the ELD requires identifying the favourable conservation status of the affected species and habitats. Adverse effects on reaching or maintaining the favourable conservation status could be described as long-term adverse effects on the situation where a habitat type or species is prospering. Annex I requires that the damage exceeds the natural fluctuations or negative variations due to natural causes and that it is not established that the species or habitats will recover within a short time and without intervention. Thus, the ELD imposes a high threshold that will not be exceeded in many instances of damage.

Furthermore, it will often be difficult to provide conclusive evidence. The availability of accurate information is crucial to make it plausible that a measurable adverse change in a species or habitat has occurred which has significant adverse effects on reaching or maintaining the favourable conservation status of such habitats or species. It is likely that most available data are collected within the framework of the EU Birds and Habitats Directives and concern the EU Natura 2000 Network. The practical applicability of the ELD will largely depend on the quality and accuracy of the information gathered under the reporting requirements of the Habitats and Birds Directives.

If conclusive evidence is provided, the identification of remedial measures is required in accordance with Annex II. It follows from Paragraph 1 of Annex II that primary remediation to

52 The close connection between the ELD and the Habitats Directive is confirmed in the Toolkit for Performing Resource Equivalency Analysis to Assess and Scale Environmental Damage in the European Union, prepared as part of the REMEDE Project. This Toolkit provides methods that are also meant to be used in the context of the Habitats Directive. See REMEDE, *supra* note 44.

53 Cf. REMEDE, *supra* note 14, p. 17; Brans, *supra* note 14, p. 539.

return the damaged natural resources to their baseline condition is not required in all circumstances. Paragraph 1.3.2 of Annex II allows complementary or compensatory actions providing an equivalent alternative to the affected natural resources or services. Paragraphs 1.3.1 and 1.3.2 of Annex II allow the costs of the various options to be a decisive factor in the choice of remedial measures. However, it could be stated that in cases of damage to a habitat or species occurring within a Natura 2000 site, the extent to which the various remedial options contribute to the restoration of the coherence of the Natura 2000 Network should be a decisive factor, rather than the costs.

Paragraph 1.3.3 allows a form of cost-benefit analysis in the evaluation of remedial measures. If the operator has taken actions to ensure that there is no longer any significant risk, no further remedial actions have to be undertaken if the competent authority considers that the costs are disproportionate to the environmental benefits. The conclusion is that although the amount of the damages is not limited, Paragraphs 1.3.2 and 1.3.3 of Annex II provide options to protect operators against liability for unreasonable costs. However, the actual restoration of the affected natural resources may be reduced or slowed down enormously by allowing operators to take primary remedial actions to the point where there is no longer any significant risk, rather than to achieve baseline conditions. In relation to the restoration of damaged species and habitats, the application of Paragraphs 1.3.2 and 1.3.3 may be crucial for the effectiveness of the ELD.

The ELD might be considered as an instrument providing a minimum level of protection to habitats and species listed in the annexes to the Habitats and Birds Directives, which occur in areas outside the Natura 2000 network. When developments included in Article 3 of the ELD cause damage which has significant adverse effects on reaching or maintaining the favourable conservation status of habitats or species occurring outside the Natura 2000 network, the ELD requires preventive or remedial measures. Unfortunately, in view of the complications arising with the practical application of the ELD, it is to be feared that the protection provided by the ELD is indeed minimal.