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Precautionary Principle and Nature Protection in EU Law

by

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1. Threats and uncertainty

Biodiversity is passing through a period of major crisis both at global and European level.[1] The nature and magnitude of the threats are well known, and include fragmentation and habitat loss, over-harvesting of fauna, trading in species, etc. On a more global scale, global warming and the depletion of the ozone layer risk precipitating much more profound changes to the distribution, structure and functions of ecosystems, as well as to habitats and species.[2] Despite past warnings, threats to biodiversity have continued unabated, making it impossible to meet the in accordance with the Aichi biodiversity target of halting biodiversity loss.[3] It will come as no surprise that a sixth extinction is underway in this new human-dominated geological age, the Anthropocene.[4]

Scientists expect that these disruptions will cause an unprecedented drop in the wealth of specific and genetic diversity. In November 2017, 15,364 scientists from 184 countries signed a 'Warning to Humanity' published in "BioScience" expressing their concerns about the future of wildlife.[5] The signatories of this manifesto stressed that humanity is on a collision course with the natural world as ecosystems are being pushed beyond their capacities to support the web of life on this planet. In their wake-up call they warned us that we are unleashing the sixth mass extinction[6] in which many forms of life are likely to disappear. With the rate of extinction running at more than 100,000 times the background rate, half of all the world's species could become extinct within a few decades if humanity is unable to endorse 'a more environmentally sustainable alternative to business as usual'.[7]

Although less marked than on other continents, Europe's systemic diversity displays a number of particular characteristics. More specifically, Western and Central Europe hosts 514 bird species, 62 amphibian species, 127 reptile species, 358 fish species, 576 butterfly species, 187 mammal species, and around 12,500 plant species. However, Europeans should seriously fear for the future of their wildlife. Indeed, many wild fauna and flora species today are passing through a period of major crisis. All over the continent, most natural or semi-natural, continental, marine and coastal ecosystems (including essential services e.g., pollination or water and air purification) have been subject to significant changes as a result of human

[1] The most tangible manifestations of biodiversity are the species of plants, animals and micro-organisms that surround us. However biodiversity means more than just species diversity. At the micro level it includes the genetic material that makes up the species, whilst at the macro level it covers natural communities, ecosystems and landscapes.

* The author wishes her colleague Alexandra Aragao to for her review

[2] D Laffoley and JM Baxter (eds), *Explaining ocean warming: Causes, scale, effects and consequences* (IUCN, 2016).

[3] Pursuant to the 5th target, by 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced. As far as the EU is concerned, see Communication from the Commission, *Our life insurance, our natural capital: an EU biodiversity strategy to 2020* (COM/2011/0244 final).

[4] L Simon, SL Lewis and MA Maslin, 'Defining the Anthropocene' 519 (2015) *Nature* 171.

[5] W Rippley et al., « World Scientists' Warning to Humanity: A second Notice' (2017) 67:12 *Bioscience* 1026-1028.

[6] R Leakey and R Lewin, *The Sixth Extinction: Patterns of Life and the Future of Humankind* (Doubleday, 1995). However, it has been calculated that more species went extinction between the times of mass extinctions than during the mass extinctions.

[7] W Rippley et al., supra note n 4, 1028.

activity. Having become increasingly fragmented as a result of transport or energy infrastructure, subject to intensive urbanization, cultivation, pollution and eutrophization, ecosystems sink, losing their ecological capacity to perform functions as well as their natural and cultural specificity.[8] For animal, plant fungi and all species this results in a fragmentation and isolation of their habitats, and represents one of the most serious threats to their long-term survival. On account of the degradation of their habitats, they are suffering an unprecedented rate of extinction, which is exacerbated by additional threats (poaching, excessive hunting). The number of species deemed by the IUCN to be under threat in Europe runs into the hundreds. Scientists expect that these disruptions will cause an unprecedented drop in the wealth of specific and genetic diversity in Europe.

Attempts to conserve habitats and their species must grapple with knowledge gaps.[9] Given the complexity of ecosystems and their processes, epistemological uncertainty arises as a result of gaps in scientific knowledge. Indeed, there are still major gaps within our understanding of how ecosystems and species interact with one another and react to new threats. Most strikingly, scientists are still struggling to ascertain the number of species.[10]

The difficulties are compounded by the fact that modelling the functioning of ecosystems and understanding the complex relationship between human activities and the state of preservation of ecosystems and species remain complex issues.[11] Ecosystems are subject to chaotic fluctuations, which cannot be adequately modelled, nor even understood, in traditional scientific terms.[12] Indeterminacy, ambiguity, inconsummensurability, and inconclusiveness might compound epistemological uncertainty. They may also be exacerbated by the inaccuracy of the scientific techniques to describe the complexity and the variability of the natural world (positive and negative feedback loops, long delay periods between cause and effect, inter-individual variations, etc.).[13] It follows that scientists know the effects of a situation, but are unable to ascertain the likelihood of their occurrence.

Scientists cannot reduce uncertainties simply by gathering more accurate data. In many cases, the uncertainty is intractable.

Uncertainties can stem from more than a simple lack of data or inadequate model of risk assessment. In effect, further sources of uncertainties may arise from various external variables, such as social factors. For instance, the level of threat faced by endangered species can be compound by poaching or unsustainable harvest, which cannot be assessed from a genuine scientific point of view.

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[8] N de Sadeleer and C H Born, *Le droit international et communautaire de la biodiversité* (Paris, Dalloz, 2004) 9-17.

[9] R Cooney and B Dickson (eds.), *Biodiversity & the Precautionary Principle* (Earthscan, 2005).

[10] According to current estimates, there are 8.7 million species. This means that 86% of existing species on Earth and 91% of species in the ocean still await scientific description. C Mora, DP Tittensor, S Adl, AGB Simpson, B Worm, 'How Many Species Are There on Earth and in the Ocean?' 9 (2011) *PLoS Biol*.

[11] P Opdam, M Broekmeyer and F Kistenkas, 'Identifying Uncertainties in Judging the Significance of Human Impact on Natura 2000 Sites' 12 (2009) *Env Science & Policy* 912-921.

[12] B Wyne, 'Uncertainty and Environmental Learning' (1992) 2 *Global Environmental Change* 111-127.

[13] J Peel, *The Precautionary Principle in Practice* (Federation Press, 2005) 34.

2. The Status of the Precautionary Principle in EU Nature Protection Law

Enshrined in Article 192(2) TFEU - a provision declaring the principles underpinning EU action in the field of environmental protection, the precautionary principle (hereinafter the 'PP') has quickly developed into one of the foundations of the high level of environmental protection in the EU.[14]

Rules on the conservation of nature are by no means lacking in the EU legal order.[15] Initial efforts on the part of the European Community (EC) led to the protection of avifauna with the adoption in 1979 of Directive 79/409/EEC on the conservation of wild birds that has been codified by Directive 2009/147/EC.[16] The protection of birds was considered by the framers of the directive to be a 'trans-frontier environment problem entailing common responsibilities', in particular relating to migratory species which 'constitute a common heritage'.[17] The need to follow a coherent nature conservation policy, in particular in the light of the seriousness of the threats hanging over all wild fauna and flora, together with their habitats, prompted the EU to adopt in 1992 the e Directive 92/43/EC on the conservation of natural habitats and of wild fauna and flora. Other pieces of EU law, such as the alien species Regulation, the Environmental Liability Directive, and the various water management directives do also contribute to nature protection. Given the space available here, these acts will not be discussed.

However, in contrast to EU food safety,[18] chemicals,[19] and GMOs[20] regulatory acts where the PP is expressly defined or referred to, neither the Bird Directive nor the Habitats Directive do specifically mention the PP in their operative provisions.[21] The question arises whether the Member State authorities could eschew to take into consideration the PP in implementing the nature protection directives. The answer is straightforward: in areas that have been harmonized, the Treaty's environmental principle applies to Member States through secondary legislation.

Article 4(3) TEU obliges the Member States to 'take all appropriate measures . . . to ensure fulfilment of the obligations arising out of this Treaty or resulting from action taken by the institutions of the Union' and 'facilitate the achievement of the Union's tasks' as well as 'abstain from any measure which could jeopardize the attainment of the objectives' of the

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[14] Case C-127/02 *Waddenzee* [2004] ECR I-7405, para 44 ; Case T-125/17, *BASF Grenzach GmbH* [2019] T:2019:638, para 272. See N. de Sadeleer, *EU Environmental Law and the Internal Market* (OUP, 2014) 45-56.

[15] N de Sadeleer, 'EU Biodiversity Law', in Morgera and J Razzaque (eds), *Biodiversity and nature protection law* (Cheltenham, Edward Elgar Publishing, 2017) 413-430.

[16] W. Wills (1994) 219

[17] Preamble, section 3.

[18] General Food Regulation governed by Regulation (EC) No 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, Art 7.

[19] REACH, Art. 1; Regulation (EC) No 1107/2009 concerning the placing of plant protection products on the market, Art. 1(4)

[20] Directive 2001/18/EC on the deliberate release of GMOs [2001] OJ L106/1, recital 8 and Art 1; Regulation 1107/2009 concerning the placing of plant production product [2009] OJ L309/1, Art 1(4).

[21] Similarly, the PP is not enshrined in the 1979 Bern Convention on the conservation of European wildlife and natural habitat.

Treaty. Article 4(3) thus subjects national authorities to wide-ranging obligations in relation to environmental protection, preservation, and conservation, in order to implement the principles of prevention and precaution.[22] Moreover, national authorities are required to interpret the environmental obligations stemming from secondary law strictly, irrespective of whether these principles are encapsulated in directives or regulations. [23]

Furthermore, the EU[24] and its Member States[25] are bound by the Convention on Biological Diversity (CBD).[26] This agreement represented a watershed in the development of the international law on biodiversity. The Preamble of that convention also provides that that 'where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat'. Although this statement is not binding, being set out in the preamble to the agreement and not its operative provisions, it is not however devoid of legal effects (interpretative function). [27] By the same token, the ecosystem approach, as developed under the CBD, should influence the PP.

Given that the PP is one of the foundations of the high level of environmental protection, nature conservation requirements must be strictly interpreted.[28] This working paper provides relevant examples to illustrate the manner in which the PP influences the implementation of the Bird and Habitats directive alike.

3. Case law regarding the Birds Directive

It will come as no surprise that the CJEU has sought to pursue a precautionary approach in a number of bird protection cases. An illustrative example of this is a judgement concerning the hunting season of wild birds in France, where the Court favoured a determination of the end of the hunting season in a manner that guaranteed the optimal level of protection for avifauna. [29] It judged that in the absence of 'scientific and technical data relevant to each individual case' – that is, in cases of uncertainty – Member States should adopt a single date for ending the season, equivalent to 'that fixed for the species which is the earliest to migrate,' and not 'the maximum period of migratory activity'. This means that so long as a degree of uncertainty remains concerning the timing of pre-mating migrations of migratory birds, the strictest method of determining the close of hunting should override methods attempting to accommodate hunting interests on the basis of scientific approximation.

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[22] A Doyle and T Carney, 'Precaution and Prevention: Giving Effect to Article 130r Without Direct Effect' 8 (1999) *EEELR* 44.
[23] Case C-127/02 *Waddenzee* [2004] ECR I-7405, para 44.
[24] Council Decision 93/626/EEC of 25 October 1993 concerning the conclusion of the Convention on Biological Diversity, *OJ* L 309, 13 December 1993, p. 1
[25] The CBD to which the EU is a contracting party is classified in the academic literature as a mixed agreement since it was concluded both by the EU as well as by the Member States. It follows that the CBD must be implemented and managed jointly by the EU and the Member States. In particular, the mixed representation at the conferences of parties guarantees the participation of both the EU and its Member States in the decision-making process.
[26] Article 216(2) TFEU.
[27] See Case C-67/97 *Bluhme* [1998] ECR I-8033, paras 36 and 38.
[28] Case C-127/02 *Waddenzee* [2004] ECR I-7405, para 44.
[29] Case C-435/93 *Association pour la protection des animaux sauvages* [1994] ECR I-67, para 21.

By the same token, the capture of thrushes in Spain with limed twigs cannot be authorized because it is by definition indiscriminate. In effect, other non-targeted bird species are likely to be captured. Although there is an obligation to release these species, there is nevertheless uncertainty about their 'chances of survival' after being 'treated'.[30]

The quails (*Coturnix coturnix*) and turtle doves (*Streptopelia turtur*) are two species that are considered to be in an unfavourable conservation status.[31] These migrating birds use Malta as a stop-over. Traditionally they have been hunted in spring. Pursuant to Article 9 of the directive, the Maltese Government applies derogation to permit spring hunting. However, the Birds Directive allows spring hunting where no other satisfactory solution exists.

The European Commission brought infringement proceedings under Article 258 EC against Malta for failing to meet the conditions set out in Article 9 of the Bird, in allowing the spring hunting of the quails and turtle doves on spring migration. In the context of these infringement proceedings, the Commission sought an application for interim relief in order to avoid serious and irreparable damage to the two species. While it is not necessary for it to be absolutely certain that the damage will occur, a sufficient degree of probability being enough, the applicant is none the less required to prove the facts which are considered to found the prospect of such damage.[32] Needless to say that damage caused by hunting of migratory birds in spring is uncembered with uncertainties.

On the one hand, the European Commission claimed that spring hunting had a devastating impact on bird populations. In particular, it observed that spring hunting affects mature adults in particular, that is to say, those of the birds that are necessary to procreate in order to maintain the species. On the other hand, the Maltese authorities argued that the Commission could not demonstrate that the hunting practice would impact on the conservation status of the game species. Demonstrating that the hunting practice would in itself have a devastating impact on the species concerned appears very difficult, if not in practice impossible.[33]

When assessing urgency, the CJEU President steered a course between these two polarized positions. In his view, the interim relief procedure is not designed to establish the truth of complex and much debated facts.[34] Moreover, he held that the bird Directive obligations had to be interpreted in accordance with the principle of precaution.[35] He underscored that spring hunting was likely to affect the conservation status of the game species, irrespective of the extent to which it reduce species' populations.[36] In fact, 'the regular elimination of individual animals keeps the hunted populations in a permanent state of alert which has harmful consequences for numerous aspects of their living conditions'.[37] In light of these different considerations, the President held that the Commission's application for interim relief could not be dismissed for lack of urgency. The acknowledgment of the fact that the status of conservation could be jeopardized, even where species are not depleted in high numbers, is testament to the principle of precaution.[38]

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[30] Opinion AG Geelhoed in Case C-79/05, *Commission v Spain* [2004] C:2004:507, para 40.
[31] Case C-76/08 R, *Commission v Malta*, Order of the president of the court [2018] C:2008:252.
[32] Case C-156/03 P-R *Commission* v *Laboratoires Servier* [2003] ECR I-6575, paragraph 36
[33] Case C-76/08 R, *Commission v Malta*, para 35.
[34] Ibidem, para 36.
[35] Ibidem, para 37.
[36] Ibidem, para 38.
[37] Ibidem, para 38.
[38] M Hedelman-Robinson, *Enforcement of EU Environmental Law: Legal Issues and Challenges*.

The setting aside of habitats plays a key role regarding birds conservation. By ruling against Spain in *Marismas de Santoña* for not having protected wetlands of importance for certain migratory species of birds, in conformity with the Birds Directive,[39] the CJEU again adopted a precautionary approach. As no reduction in the number of protected birds had been observed, the Spanish authorities disputed that the destruction of a valuable ornithological site breached the requirements of the Directive. However, their argument was rejected on the grounds that the obligation to preserve the natural habitats in question applied whether or not the population of protected birds was disappearing from these areas.[40] The obligations on Member States '… exist before any reduction is observed in the number of birds or any risk of a protected species becoming extinct has materialised'.[41] In so ruling, the Court considered the context of uncertainty resulting from the fact that destruction of a natural habitat does not necessarily translate into an immediate decline in its animal populations.

4. Case law regarding the Habitats Directive

The implementation of the Habitats Directive 92/43/EC is also underpinned by the PP. Five developments within the case law must be highlighted.

4.1. Designation of Natura 2000 sites

The designation of conservation sites under the Habitats Directive can give rise to difficulties with respect to migratory species. In particular, Article 4(1) of the Directive places a high evidentiary burden on State authorities.[42] Given the inadequate data held in relation to cetaceans, the PP must be applied when designating marine conservation sites. Accordingly, the designation of offshore marine sites should not be precluded owing to the paucity of available data as to whether the site is 'essential' for life and reproduction.[43]

4.2. Identification of the plans or projects that are 'likely' to significantly affect a Natura 2000 site

The sites that have been designated as parts of the Natura 2000 network are not subject to an absolute protection. However, in order for a project or plan to be authorized, Article 6(3) of the Directive provides for a specific environmental impact assessment procedure of 'plans or projects' 'likely' to have 'a significant effect' on a conservation site.[44] The question arose as to which plans or projects are 'likely' to significantly affect a Natura 2000 site. A proportionality test could be envisioned. For the most vulnerable species (e.g. the species listed in Annex IV of the directive) remote risks could amount to a significant effect. In

[39] Directive 79/409/EEC codified by Directive 2009/147/EC on the conservation of wild birds.
[40] Case C-355/90 *Commission v Spain* [1993] ECR I-6159, para 28.
[41] Ibidem, para 54.
[42] Art 4(1) requires that 'for aquatic species which range over wide areas, such sites will be proposed only where there is a clearly identifiable area representing the physical and biological factors essential to their life and reproduction'.
[43] S Lukand and S Gregeson, 'Marine species and management in the EU', in C-H Born and al. (ed), *The Habitats Directive in its EU Environmental Law Context* (Routledge, 2015) 407-409.
[44] N de Sadeleer, 'Assessment and Authorisation of Plans and Projects Having a Significant Impact on Natura 2000 Sites' in B Vanheudesen and L Squintani (eds), *EU Environmental and Planning Law Aspects of Large-Scale Projects* (Intersentia, 2013) 237.

contrast, for species that are more common the risks should be considered more serious in order to trigger the impact assessment.[45]

The CJEU held in *Waddenzee* that the significance of the potential effects 'must be established in the light, inter alia, of characteristics and specific environmental conditions of the site concerned by that plan or project'.[46] However, it is difficult to determine in advance whether a plan or a project will have 'a significant effect' on endangered species encountered on the protected site. There is clearly a paradox: since the impact of a plan or a project can only be identified as being significant based on an impact assessment, it is difficult to know how the decision-maker can determine in advance that such a plan or project would not have significant effects without having previously carried out an assessment.[47] In this regard, precaution must play a key role in the screening of such plans and projects.

In *Puszcza Białowieska*, the CJEU held that 'having regard to the precautionary principle, where a plan or project not directly connected with or not necessary to the management of a site may undermine the site's conservation objectives, it must be considered likely to have a significant effect on that site'.[48] It follows that the mere fact that a plan or a project departs from the objectives set forth by the manager of the Natura 2000 site is sufficient to entail significant effects and, as a result, to trigger the assessment procedure. Whenever the reality and the seriousness of the potential risks of adversely affecting the conservation and integrity of a Natura 2000 site were not fully identified, assessed and, where appropriate, ruled out, the national authorities cannot adopt the plan, without also infringing the PP.[49] Hence, the mere probability that a plan or a project might have a significant effect is sufficient therefore to require an appropriate assessment. Were the developers want to avoid to carry out an appropriate assessment, they must prove to a point of certainty that their activity will not impact the protected habitat, not the other way around. Accordingly, the significance of the impacts must be assessed against the conservation objectives that are related to the conservation status of the habitats and their species.

In recent judgments, the CJEU has considered new ways of interpreting the requirements applicable to traditional EIAs, which must be carried out whenever there is a probability or a risk that an Annex II Directive 2011/92 project may have 'significant effects on the environment by virtue, inter alia, of their nature, size or location'. The Court ruled that 'in the light, in particular, of the precautionary principle … such a risk exists if it cannot be excluded, on the basis of objective information, that the plan or project will have significant effects on the environment'.[50] Thus the rationale of the *Waddenzee* case law applies henceforth to all projects and not exclusively to projects jeopardizing the conservation of Natura 2000 sites. It follows that an EIA is indispensable as long as there is no absolute certainty regarding the absence of any environmental impact on any natural sites. Along the same lines, the Belgian

[45] C Sobotta, 'The impact of species protection on land-use planning, in C-H Born et al (ed.), *The Habitats Directive, above,* 155.
[46] Case C-127/02 *Waddenzee* [2004] ECR I–7405, para 48.
[47] E Truhle-Marengo, 'How to Cope with the unknown: a few things about scientific uncertainty, precaution, and adaptative management', in C-H Born (ed.), *The Habitats Directive in its EU Environmental Law Context: European Nature's Best Hope?* (London, NY, Routledge, 2014) 340.
[48] Case C-441/17 *Commission v Poland* [2018] C:2018:80, para 112.
[49] Opinion of AG Bot in Case C-441/17 *Commission v Poland* [2018] C:2018:80, para 169. See J. Sambon, *Aménagement-Environnement* 5 (2018)281-4.
[50] Case C-526/16 *Commission v Poland* [2017] C: 2018: 356, para. 66.

Council of State has held that, where there is a doubt concerning the absence of any significant impact of a project on a protected species, an EIA is required.[51]

In applying an *in dubio pro natura* standard, this case law replaces thus the positive criterion (ascertaining a significant impact) with a negative criterion (demonstrating the absence of a significant impact in order to preclude the need for an EIA).

4.3. Demonstration of the absence of risks for the integrity of the site

The assessment procedure is triggered not by a certain risk, but by the likelihood of the occurrence of significant effects on the integrity of the site. In the well-known 2004 *Waddenzee* case, the CJEU handed down a landmark judgment reviewing the validity of the Dutch EIA on fishing activities taking place within bird protection areas. According to the Court in, since the impact study regime covers plans and projects 'likely' to affect a site, the wording of this provision implies that the conductor of the study must be able to identify, according to the precautionary principle, even those damages which are still uncertain.[52] Indeed, the aim of the assessment is to determine whether a plan or project is compatible with the conservation objectives of the site.[53] It follows that the assessment 'may not have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the proposed works on the protected area concerned'.[54]

In addition, the Habitats Directive's authorization regime requires that the competent authority ensure that the project at stake will not adversely affect the integrity of the site concerned. Accordingly, the authorization can only be passed where the assessment demonstrates the absence of risks for the integrity of the site. 'Where doubt remains as to the absence of adverse effect on the integrity of the site', the Directive requires, in line with the precautionary principle, the competent authority to refrain from issuing the authorization.[55] In accordance with the logic of the PP, authorities can if need be order additional investigations in order to remove the uncertainty.[56]

Although it is likely to restrict economic and property rights, this authorization criterion 'integrates the precautionary principle'.[57] Conversely, a less stringent criterion would not be

[51] CE Bg., 18 February 2015, *Poli*, n° 230.237.
[52] Case C-127/02 *Waddenzee* [2004] ECR I–7405, para 44.
[53] Case C- 441/03 *Commission v Netherlands* [2005] ECR I-3043.
[54] Case C-164/17 *Grace and Sweetman* [2018] C:2018:593, para 39 ; Case C-461/17 *Brian Holohan* [2018], para 34.
[55] Case C-127/02, *Waddenzee*, para 57. This interpretation has been confirmed in Case C-6/04 *Commission v UK* [2005] C:2005:626 ; Case C-98/03 *Commission v Germany* [2006] C:2006:3; Case C-418/04 *Commission v Ireland* [2007] C:2007:780; Case C-304/05 *Commission v Italy* [2007] C:2007:532; Case C-226/08 *Stadt Papenburg* [2010] C:2010:10 ; Case C- 239/04 *Commission v Portugal* [2010] C:2006:665; Case C-209/02 *Commission v Austria* [2010] C:2010:602 ; Case C-258/11 *Sweetman* [2013] C:2013:220, paras 41 to 43. See further ER Stokes, 'Liberalising the Threshold of Precaution – Cockle Fishing, the Habitats Directive, and Evidence of a New Understanding of "Scientific Uncertainty"' 7 (2005) ELR 206; A García-Ureta and J Cubero Marcos 'Directiva de Hábitats: Principio de precaución y evaluación de planes y proyectos' 70 (2004) *Revista Vasca de Administración Pública* 361.
[56] Opinion of AG Kokott in *Waddenzee*, paras 99-111.
[57] Case C-127/02 *Waddenzee*, para 58.

as effectively in ensuring the fulfilment of the conservation objectives set forth by the EU lawmaker.[58] Of course, it must be remembered that the strict interpretation endorsed by the CJEU is a consequence of the manner in which the authorization regime for projects endangering threatened habitats has been formulated by lawmakers.

Despite a negative assessment of the implications for the habitat of the corncrake (*Crex crex*), the Austrian authorities authorised the proposed extension of the golf course covering partly a Natura 2000 site. This extension could have threatened the continued existence of the corncrake population in the Central Alps.[59] The fact that the extension, after its completion, had not caused significant adverse effects is irrelevant.[60] It is at the time of the decision-making that all scientific doubt have to be removed.[61]

4.4. Interim relief procedure

The PP can also influence the conditions for seeking interim relief in relation to national measures that jeopardize the integrity of Natura 2000 sites. Regarding illicit forestry works that took place in the Polish Natura 2000 Puszcza Białowieska site the Vice-President of the CJEU, 'taking into account the PP', ordered the suspension of the operations at issue[62] and later on the Grand Chamber of the Court granted the interim relief of the contested measure on the grounds that the pending main proceedings appeared to be serious.[63] Indeed, the Commission' obligation to establish a *prima facie* case in the main proceedings 'without reasonable substance' is fulfilled where the defendant State is unable to show the Commission's arguments based on infringements of different provisions of the Habitats and of the Birds Directives are wholly unfounded.[64] In addition, the two substantive requirements that must be met in order for interim measures to be granted - the urgency related to the damage likely to arise and the balance of interests - were also assessed with reference to the PP.[65]

4.5. Hunting of protected species

As regards protected species, a *pro dubio natura* approach also prevails. In accordance with the PP, a Member State must refrain from authorizing the killing of wolves where there is doubt as to whether or not such a derogation will be detrimental to the maintenance or restoration of populations of such an endangered species at a favourable conservation status.[66]

5. Wildlife and free movement of goods

The birds and habitats Directives allow for differentiation. Firstly, by prescribing broad objectives but leaving the choice of implementing to Member State authorities, these

[58] Ibid, para 58.
[59] Case C- 209/02 *Commission v Austria* [2004] ECR I-1211.
[60] Ibidem, paras 27-29.
[61] F Haumont, « Appropriate Impact Assessment », in Born (ed.), *The Habitats Directive, above*, 99.
[62] C-441/17 R, *Commission v Poland* [2017] C:2017:622, para 25. See the analysis of S Du Pont, « L'éclosion de l'astreinte dans le référé européeen irrigué par le principe de précaution », Jean Monnet Working Paper 2020/3.
[63] Ibid, para 43.
[64] Ibid, paras 41-42.
[65] Ibid, paras 60, 61 and 63.
[66] C-674/17 *Luonnonsuojeluyhdistys Tapiola* [2019] C:2019:851 para 69.

directives are well tailored to take into account the diversity of administrative and legal culture in the EU. In so doing, the EU lawmaker has increased the discretion of national authorities regarding the choice of the form and appropriate means for implementing the nature protection obligations. Secondly, in virtue of Article 193 TFEU, any Member State may at any time freely decide to maintain or adopt more stringent standards than those provided for under an act adopted on the basis of Article 192 TFEU.[67] As a matter of course, these more stringent domestic measures have to be consistent with the free movement of goods.[68] Hence, since environmental objectives are predominant, considerations regarding the internal market become secondary.

At this stage, it is necessary to give a brief outline of Articles 34 and 35 that prohibit Member States from restricting free movement. Accordingly, domestic environmental measures must ensure that the economic freedoms enshrined in Treaty law are not breached. The striking feature of Article 34 is its sheer breadth. In *Dassonville*, the Court of Justice (CJEU) has broadly interpreted the concept of measure having equivalent effect to quantitative restrictions (MEEQR). According to the wording of the judgment, 'all trading rules enacted by Member States which are capable of hindering, directly or indirectly, actually or potentially, intra-Community trade are to be considered as measures having an effect equivalent to quantitative restrictions. [69] Later on, in *Cassis de Dijon*, the Court clarified that MEEQRs, not limited to measures directly affecting imports, were encompassing measures that are 'applicable without distinction' to foreign and domestic goods, as a foreign producer may find it more difficult to respect these rules than the national producer.[70]

That being said, Article 34 does not enshrine a general freedom to trade or the right to the unhindered pursuit of one's commercial activities.[71] The ground of justification linked to the 'protection of health and life animals or plants' is the cornerstone of national legislation on the protection of species of wild fauna and flora.

Regarding the prohibition laid down by the Danish nature conservancy authorities to import bees other than the endemic subspecies *Apis mellifera mellifera* on the island of Læsø, the CJEU considered that 'measures to preserve an indigenous animal population with distinct characteristics contribute to the maintenance of biodiversity by ensuring the survival of the population'.[72] The judgment has thrown into relief the importance of biodiversity given that the Court considered that 'the establishment . . . of a protection area within which the keeping of bees other than Læsø brown bees is prohibited', by reason of the recessive character of the latter's genes, constitutes an appropriate measure in relation to the aim' of biodiversity conservation. In addition, the population of bees at risk must not face an immediate danger of extinction for the exception to be justified. In particular, the CJEU ruled that the Danish wildlife measure was justified under Article 36 TFEU, notwithstanding the lack of conclusive

[67] Pursuant to Article 17 of the Birds Directive, the Member States may introduce stricter measures than those provided for under this directive. In contrast, the Habitats Directive is silent on this matter. The Member States' right to enact more stringent rules than the EU wildlife standards is not subject to the granting of a specific authorization by the European Commission. See Case C-510/99 *Tridon* [2001] ECR I-7777, para. 45; Case C-100/08 *Commission v Belgium* [2009] ECR I-140, para. 60.
[68] N. de Sadeleer, *EU Environmental Law and the Internal Market* (OUP, 2014) 237-334.
[69] Case 8/74 *Dassonville* [1974] ECR I-837.
[70] N de Sadeleer, « Trading in Wildlife under the Habitats and Birds Directives. Restricted Movement of Species v Free Movement of Goods », in Born (ed.), *The Habitats Directive, above,* 160-177.
[71] Case C-292/92 *Hünermund* [1993] ECR I-6787, 6813.
[72] Case C-67/97 *Bluhme* [1998] ECR I-8033, para. 33.

evidence establishing both the nature of the sub-species and its risk of extinction.[73] In so doing, the Court took implicitly into consideration the precautionary obligation flowing from the CDB, a mixed international agreement.[74]

For the marketing of certain animals a number of national wildlife regulations require prior inclusion of those goods on an 'authorized list' or 'positive list'. This regulatory approach makes marketing of those goods more difficult and more expensive, and consequently hinders trade between the Member States.[75] The CJEU has consistently held that legislation which makes the holding of animals subject to prior inclusion of the species/category to which they belong in a 'positive list'—and which also applies to specimens of species which are legally held or produced in other Member States—is in compliance with EU law only if several conditions are satisfied.[76]

The question arises as to the extent to which the Member States can invoke lingering uncertainties with respect to two of these conditions. On the one hand, the drawing up of such a list 'must be based on objective and non-discriminatory criteria'.[77] By way of illustration, physiological, ethological, and ecological needs, the level of threat to human or animal health or to ecosystem, and the risk of escape are deemed to be 'objective and non-discriminatory criteria' justifying a positive list of wild mammals that can be traded.[78]

On the other hand, an application to obtain the inclusion of product or a substance in that national list may be refused by the competent administrative authorities only if the holding of specimens of that species poses 'a genuine risk to the protection of or compliance with the interests' justifying the MEE.[79] In particular, the application to have a species included in the list of species of mammal which may be held may be refused by the competent authorities 'only on the basis of a full assessment of the risk' posed to animal protection.[80]

It is only 'where it proves impossible to determine with certainty the existence or extent of the risk envisaged because of the insufficiency, inconclusiveness or imprecision of the results of the studies conducted, but the likelihood of real harm to human or animal health or to the environment persists should the risk materialise, the precautionary principle justifies the adoption of restrictive measures'.[81]

6. Conclusion

In ensuring the conservation of a wide range of rare, threatened or endemic animal and plant species as well as characteristic habitat types in Europe, The Birds and Habitats Directives form the cornerstone of EU action on biodiversity. The core objective of both Directives is to achieve a favourable conservation status of these habitats and species - in other words, that habitats have sufficient area and quality and species have a sufficient population size to

[73] Case C-67/97 *Bluhme* [1998] ECR I-8033.
[74] Ibid, paras 36 and 38.
[75] Case C-24/00 *Commission v France* [2004] ECR I-1277, para. 23; and Case C-219/07 *Andibel* [2008] ECR I-4475, para. 23.
[76] *Andibel*, paras 32–6; and Case 100/08 *Commission v Belgium* [2009] ECR I-140, paras 97–101.
[77] *Andibel*, para. 34; and Case 100/08 *Commission v Belgium*, para. 98.
[78] *Andibel*, para. 26.
[79] *Andibel*, para. 36; and Case 100/08 *Commission v Belgium*, para. 100.
[80] *Andibel*, para. 37.
[81] Ibidem, para. 38.

ensure their survival into the medium to long term, along with favourable future prospects in the face of pressures and threats. In particular, the Natura 2000 network aims in ensuring the conservation and sustainable use of nature in Europe.

The Birds and Habitats Directives should not lull us into thinking that biodiversity lost has come to a halt. In spite of all the actions taken at EU level to combat biodiversity loss, only a small percentage of habitats and species protected under EU legislation are in a favourable state. Much of our biodiversity remains greatly impoverished and continues to decline.[82] The acid test for EU nature conservation law lies in its application, which is incumbent upon Member States. First, the protective regimes are rife with exemptions that undermine their effectiveness. Second, the survival of species depends mostly upon the willingness of Member States to safeguard their habitats through the implementation of the Natura 2000 network. The numerous findings against the Member States by the CJEU make up only the tip of the iceberg. The absence of political will, the lack of financial resources, the predominance of traditional interests over ecological interests, outdated systems of criminal law, the restrictions placed on the standing of nature protection NGOs; the ambiguity of the applicable legal provisions are just a few of the factors undermining the effectiveness of the EU nature protection rules. Moreover, although science plays a key role in nature conservation, decisions concerning the exploitation of ecosystems stop far short of scientific advice.[83]

This working paper highlights the interpretative function of the PP with respect to a number of nature conservation issues ranging from hunting to trading in wildlife products. A distinction must be drawn between health cases on one hand[84] and nature protection cases on the other hand. In matters relating to health, where scientific knowledge is far more advanced than it is in the environmental domain, various rules of secondary law flesh out the PP further in relation to the Commission's enforcement powers. In sharp contrast, within genuine environmental cases, the obligation to take account of the most salient scientific findings does not warrant strict rules in relation to evidence.[85] In fact, the uncertainties are far more pronounced in this area given the difficulty in predicting how ecosystems will respond to ecological risks.

[82] Communication from the Commission - Halting the loss of biodiversity by 2010 - and beyond - Sustaining ecosystem services for human well-being (COM/2006/0216 final).
[83] S Andresen and al., 'The Precautionary Principle: Knowledge Counts but Power Decides?' in R Cooney and B Dickson (eds), *Biodiversity and the Precautionary Principle* (Sterling, 2012) 41.
[84] Indeed, these last years, the PP has been regularly invoked before the EU courts in food safety and drugs cases.
[85] Opinion AG Kokott in Case C-343/09 *Afton* (n 17) para 34.