EU Biodiversity Law: Wild Birds and Habitats Directives

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Second Revised Edition

This is the second edition of the book published in 2020. In the intervening years, various processes have been observed. The most worrying is undoubtedly the continuing degradation of ecosystems and the decline of species. Efforts, whether international or regional, as in the case of the European Union (EU), do not seem to reverse such degradation, as documented by the European Environment Agency and other groups of scientists. The results of COP 16 within the Convention on Biological Diversity (CBD) concluded in early November 2024 have been minor, despite the agreement to create a fund to share benefits from the use of genetic data sequenced from the natural world. Against this background, EU biodiversity legislation has formally changed little. The EU still lacks a general framework for the protection of biodiversity as a whole other than the Convention on Biological Diversity. The notable exception in the legal framework has been the adoption, after much reluctance in the Council of Ministers, of Regulation 2024/1991, on nature restoration (NRL), the results of which are uncertain owing to the complexity of the tasks. This is not to say that European biodiversity legislation, exemplified by the Wild Birds Directive (2009/147, WBD) and the Habitats Directive (92/43, HD), no longer sets ambitious targets and demands results that must be tangible, but during these last years the change has largely been brought about by the case law of the Court of Justice (CJEU), which has steadily and consistently reaffirmed the scope of the relevant legislation and its serious implications for Member State authorities, economic operators and society at large. However, the question remains whether the national authorities, including the judiciary, are aware of the implications of the case law and the obligations it imposes.

Since 2020, but also earlier, there has been a strong movement, initiated in other third countries, to endow Nature with rights in the face of claims that 'traditional environmental law' (also EU biodiversity law) has done little to halt its deterioration. It cannot be ignored that proponents of such rights for Nature raise important issues, even of a constitutional dimension, but they also lead to the legitimate question of whether such recognition can achieve what the, seemingly 'smaller' legal obligations, have so far failed to do. At the end of 2020, the EU adopted the so-called 'Green Deal',[1] which sets out an ambitious programme of measures within the context of the fight against climate change. As an offshoot of this deal, the EU adopted the Biodiversity Strategy up to 2030, entitled 'Bringing nature back into our lives'.[2] As in previous occasions,[3] the targets are ambitious, among others (1) to legally protect a minimum of 30% of the land, including inland waters, and 30% of the sea in the Union, of which at least one-third should be under strict protection, including all remaining primary and old-growth forests, and in particular (2) to ensure that there is no deterioration in conservation trends or in the status of protected habitats and species and that at least 30% of species and habitats not currently in favourable

1 COM(2019) 640 final, The European Green Deal.

2 COM(2020) 380 final, EU Biodiversity Strategy for 2030. Bringing nature back into our lives.

3 The first biodiversity strategy was adopted in 1998, COM(98) 42 final.

status will fall into that category or show a strong positive trend towards falling into that category by 2030.

However, doubts remain as to whether the results will ultimately be meagre, and similar lamentations will be heard. Indeed, the very title of the strategy is questionable: 'Bringing nature back into our lives', or should it be 'Bringing our lives into harmony with nature?'. The title suggests that it is Nature that should make the effort to come closer to mankind, rather than mankind changing its behaviour to respect Nature. In fact, the deterioration of biodiversity, ecosystems functioning, and the unsatisfactory status of many species is not only due to activities directly aimed at achieving such a result. It happens because there are many activities that affect biodiversity and that are difficult to control, because everyone has an impact on the state of biodiversity. Mass activities such as tourism, including the widely used euphemism for 'low-cost' flights, or the development of infrastructure that fragments habitats and species corridors, to name but a few, exponentially increase the use of resources while reducing the living space for biodiversity. Like the environment, biodiversity struggles to find its place amidst a myriad of activities and decisions, without its supposed 'intrinsic value' (as proclaimed in the CBD's preamble) being fully reflected in decision-making processes, starting with legislation.

Biodiversity conservation needs to be better understood, including at the scientific level, which is still incomplete in many areas. It is remarkable that there is much more knowledge about the surface of the Moon and Mars than about the deep seabed and the species it contains.[4] There is a danger of believing that designating protected areas will save biodiversity when it is under external pressure, with the paradigm of climate change. Biodiversity, and therefore its protection, must be explicitly mentioned in the EU Treaties, without the reference to the 'environment' being sufficient. It must also be protected by means of legal presumptions taking precedence over other measures, not only when assessing the impact of plans or projects on Natura 2000 sites or when protecting certain priority species. There is also a need for public institutions to be more transparent about the reality of biodiversity and the actions that have an impact on it. European citizens still do not know whether a condemning judgment against a Member State has been properly complied with, and not only because the Commission sometimes opens a second procedure for failure to comply with the first ruling. They also have the right to know whether the compensatory measures for plans or projects affecting Natura 2000 sites have been complied with. And to add two more cases, one might wonder why the European Commission does not publish requests for opinions under the WBD

[4] European Parliament resolution of 8 July 2021 on the establishment of Antarctic Marine Protected Areas (MPAs) and the conservation of Southern Ocean biodiversity, para. 8. In COM(2020) 259 final, on the implementation of the Marine Strategy Framework Directive (Directive 2008/56/EC), the Commission declared: "In general, cetacean populations are either in unknown or not good status. Cephalopods and reptiles are too poorly monitored (e.g. 33% of the reports on marine turtles under the Habitats Directive were in unfavourable conservation status and 67% unknown)."

as well as its own opinion in the Official Journal of the EU, instead of relegating them to a website press release. A second example is the complete lack of information on the enforcement of a CJEU judgment concerning the WBD and the HD (and the environment in general). Indeed, citizens may know that a Member State has been condemned, but they are completely unaware of the degree of compliance with the judgment because they are not informed by the Commission or their national authorities. The only way they can find out is if the Commission decides to open a second infringement procedure because the first judgement has not been complied with. This does not come close to providing adequate transparency in such an obvious matter. All this, among other matters, reflects the fact that biodiversity protection, with its many facets, is still the little sister compared to other policy areas. Political will is important to achieve the goals set by legislation. But if the will is not to waver, rules must be binding, not just admonitory. This is the only way to hold those who must implement them to account and to give biodiversity the status it deserves to safeguard its future, which is ultimately our own.

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I. Introduction

The EU is an important actor in international biodiversity law, although its role is not always as effective as it should be.[1] The EU does not solely intervene within the framework of the conventions to which it is a party, which largely respond to commitments between States with very different realities. For this reason, EU legislation tends to go beyond international standards, even though it lacks a general biodiversity rule other than the Convention on Biological Diversity to which it is a Party (along with the EU Member States). Being a supranational organisation comprising 27 Member States, the EU has problems in becoming a party to several conventions (e.g., the International Convention for the Regulation of Whaling (1946), which only admits States).[2] Similarly, becoming a Party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (1973, CITES) only took place on 8 July 2015, 32 years after the amendment allowing accession, thus reflecting the unwillingness of other States to accept the EU's membership and thrust. A review of all conventions relevant for biodiversity protection would be very lengthy, and it has been decided to refer to five of particular significance for the EU: the Convention on Biological Diversity (CBD, 1992), the Convention on the Conservation of European Wildlife and Natural Habitats (CCEW, Bern, 1979), the Convention on the Conservation of Migratory Species of Wild Animals (CMS, 1979), the Convention on Wetlands of International Importance especially as Waterfowl Habitat (CWII, 1971) and CITES. Obviously, those conventions do not cover those to which the EU is a party, whether on a global level, as is the United Nations Convention on the Law of the Sea (and the agreement on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction),[3] the Convention on the Conservation of Antarctic Marine Living Resources (1980), the International Convention for the Conservation of Atlantic Tunas (1996) or the Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, in particular in Africa (1994), or within a regional context, as is the case with the Convention on the Protection of the Alps (1991),[4] the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR, 1992), the Convention on Cooperation for the Protection and Sustainable Use of the Danube (1994), or the Convention on the Protection of the Rhine (1999).

1 Krämer, L., "Presente y Futuro de la Política Medioambiental Europea", in García Ureta, A., (coord.), *Estudios de Derecho Ambiental Europeo* (Lete, 2005), 223-268.

2 However, for example, the EU is a party to the Agreement for the establishment of the Indian Ocean Tuna Commission (1993).

3 Council Decision 2024/1830.

4 However, the EU is not a party to the Framework Convention on the Protection and Sustainable Development of the Carpathians (2003).

II. The Convention on Biological Diversity

1. Introduction: general context and objectives

The Convention on Biological Diversity (CBD) is a benchmark in this area.[5] However, the wording of its provisions is a common cliché in international law, as a large part of its articles are not binding. Indeed, a text that repeats the phrase "as far as possible and as appropriate" up to eight times,[6] in the case of measures that can be considered basic in terms of biodiversity protection, clearly shows its lack of binding nature. The addition of other phrases such as "in accordance with their particular conditions and capabilities", used in the case of general measures that, according to the CBD, have to be taken for the purpose of conservation and sustainable use of biodiversity,[7] or "taking into account the special needs of developing countries",[8] or the use of other locutions such as "where necessary",[9] or "shall endeavour",[10] shows that the CBD is

5 Birnie, Boyle and Redgwell, *International Law and the Environment*, 2021, 683-723. Boyle, A.E., "The Rio Convention on Biological Diversity, in Bowman, M., and Redgwell, C., *International Law and the Conservation of Biological Diversity* (Kluwer, 1996), 33-49. Burhenne-Guilmin, F., and Casey-Lefkowitz, S., "The Convention on Biological Diversity: A Hard-Won Global Achievement", *Yearbook of International Environmental Law*, 1992, 43-59. Campins Eritja, M., "Convenio sobre la Diversidad Biológica", in Álvarez Carreño, S., García-Ureta, A., and Soro Mateo, B., *Diccionario Jurídico de la Biodiversidad* (Tirant lo blanch, 2023), 87-94. de Klemm, C., *Biological Diversity Conservation and the Law* (IUCN-The World Conservation Union, 1993), 17-25. de Sadeleer, N., and Born, C., *Droit International et Communautaire de la Biodiversité* (Dalloz, 2004), 91-135. Hermite, M-A., "La Convention sur la Diversité Biologique", *Annuaire Français de Droit International*, 1992, 844-870. Hubbard, A., "Convention on Biological Diversity's Fifth Anniversary: A General Overview of the Convention – Where has it been and where is it going?", *Tulane Environmental Law Journal*, 1997, 415-446. Klein, C., "New Leadership Need: The Convention on Biological Diversity", *Emory International Law Review*, 2016, 135-165. Koester, "The Biodiversity Convention Negotiation Process and some Comments on the Outcome", *Environmental Policy and Law*, 1997, 175-192. Le Lestre, P., "CBD at Ten: The Long Road to Effectiveness", *Journal of International Wildlife Law & Policy*, 2002, 269-285. Martín Mateo, R., *Tratado de Derecho Ambiental III* (Trivium, 1997), 55-115. Morgera, E., and Tsioumani, E., "Yesterday, Today and Tomorrow: Looking Afresh at the Convention on Biological Diversity" (August 22, 2011), University of Edinburgh School of Law Working Paper No. 2011/21. Pérez Salom, J.R., *Recursos Genéticos, Biotecnología y Derecho Internacional* (Aranzadi, 2002). Sands, P., *Principles of International Environmental Law* (Cambridge University Press, 2003), 515-523. Tejera, V., "Tripping over Property Rights: Is It Possible to Reconcile the Convention on Biological Diversity with Article 27 of the TRIPs Agreement?", *New England Law Review*, 1999, 967-987. Tinker, C., "A 'New Breed' of Treaty: The United Nations Convention on Biological Diversity", *Pace Environmental Law Review*, 1995, 191-218.

6 Arts. 5, 6(b), 7, 8, 9, 10 and 11.

7 Article 6.

8 Arts. 12, 17 and 20.

9 Article 8(b).

10 Arts. 8(i) and 15(2).

to be understood as a compromise between different States, with very diverse environmental and economic realities,[11] in order to establish a general framework that can subsequently be used for the adoption of further agreements.[12] In this respect, it is similar to other international conventions, although perhaps more so, given its very broad scope and the variety of activities and processes that can affect biodiversity. These aspects would also explain the differences between its preamble and articles. In the case of the EU, the CBD constitutes a normative reference, but in some areas it has been superseded by the various provisions that the EU has adopted, such as Directive 79/409 (now Directive 2009/147) and Directive 92/43, which was adopted a fortnight before the CBD. However, it is debatable whether the CBD has a correct translation in terms of its subject matter (i.e. biodiversity as a whole), which certainly goes far beyond these two directives. The Convention does update and systematise in a general way the various conservation mechanisms which, because of the date of its adoption, were not considered in the Convention on the Conservation of European Wildlife and Natural Habitats (1979). In other cases, such as the Ramsar Convention (1971), the CBD has brought about a change of direction by regulating in a more comprehensive manner the different aspects and techniques that have an impact on biodiversity conservation.

However, the influence of the CBD may not be as significant as its text would suggest. First, because of its limited binding force, as discussed above. Second, because of its advantage over other international instruments. This is perhaps one of the most controversial aspects today. In fact, States are adopting conventions on environmental issues and other issues that may be related to them (e.g. patents or phytosanitary or, more generally, trade measures, to name but a few), without it being clear how they relate to each other. In the case of the CBD, it is stated that its provisions "shall not affect the rights and obligations of any Contracting Party deriving from *any existing international agreement*, except where the exercise of those rights and the performance of those obligations would cause serious damage or threat to biological diversity".[13] The CBD thus respects commitments previously made by States Parties to the CBD and other international instruments, except for the last clause that such other obligations "may cause serious damage to biodiversity". Although the rule is phrased in terms of probability, it remains unclear what is meant by "serious damage", especially since it refers to biodiversity as a whole, as defined by the CBD itself.[14] However, the manifestation of such damage may not only occur within the jurisdiction of a State, as provided for in Article 4 on the scope of the CBD, but should also include damage that may be caused to biodiversity as a result of

11 Note that the preamble states, *inter alia*, that economic and social development and poverty eradication are "basic and fundamental priorities of developing countries".

12 Kiss, "Les Traités-Cadre", 1993, 792-797; Birnie, Boyle and Redgwell, *International Law and the Environment*, 2021, 685-686.

13 Article 22, italics added.

14 Article 2.

processes and activities, irrespective of where the effects are manifested (e.g. on the high seas, or in third States).[15] Thirdly, the CBD lacks a formal mechanism to systematically monitor its implementation by States Parties.[16] In sum, the CBD does not adopt a hierarchical position vi-à-vis other conventions with the result that the panorama tends to be fragmented and lacking an overall strategy and coherent structure.[17]

The CBD has three fundamental objectives, (1) the conservation of biological diversity, (2) the sustainable use of its components, and (3) the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, *inter alia*, through adequate access to genetic resources and appropriate transfer of relevant technologies, considering all rights over those resources and to those technologies, as well as through appropriate funding. Thus, the CBD does not have conservation as its sole objective, as it also includes other objectives that show that resources are not untouchable, but are at the service of present and future generations (sustainable use).

2. Biodiversity and its conservation

The CBD defines "biological diversity" as "the variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems".[18] This definition adequately responds to the idea of biodiversity, in particular by including the notion of "variability", which is one of its key aspects, without reducing it to a mere sum of elements.[19] The CBD refers to "any source", whether terrestrial, marine or aquatic, in relation to the three basic levels it contemplates, i.e. habitats, species, and genetic resources, which, however, are not systematised in any Annex. The notion of biological diversity implies the variety of basic genetic elements found in individual representatives of a species; species diversity (the variety of living organisms found in a particular place; and ecosystem diversity: the variety of species and ecological functions and processes, both in typology and number, occurring in different physical settings). However, the CBD does not list ecosystems or species, so, at least potentially, it applies to all of them.

15 Article 4(b)).

16 Morgera and Tsioumani, "Yesterday, Today and Tomorrow: Looking Afresh at the Convention on Biological Diversity", 2011, 6.

17 Juste Ruiz, J., "Gaps in International Biodiversity Law and Possible Ways Forward", in Campins Eritja, M., and Fajardo del Castillo, T., *Biological Diversity and International Law* (Springer, 2021), 35-56, 38.

18 Article 2 (first paragraph).

19 Bowman, M., "The Nature, Development and Philosophical Foundations of the Biodiversity Concept in International Law", in Bowman, M., Redgwell, C., International Law and the Conservation of Biological Diversity (Kluwer, 1996), 5-31, 5-6.

Although it is one of its main objectives, the CBD does not define what "conservation" is. In international law and in other texts adopted by various States, the traditional term has been "protection". Considered more neutral, it has been criticised for not requiring a specific period or even the development of a specific policy.[20] Conservation is not limited to mere preservation. The first recital of the preamble to the CBD refers to the "intrinsic value" of biological diversity and its provisions refer to ensuring its conservation, implying that this is an end in itself. This would mean that, notwithstanding other issues raised by the CBD, the objective of conservation would not be reduced to meeting the needs of present or future generations. Rather, in the context of what is known as in situ conservation, the actions listed show that this requires an active policy and not just the protection of the current state of habitats or species, including the rehabilitation and restoration of degraded ecosystems or the recovery of endangered species.

According to the CBD, "the conservation" of biodiversity is "in the common interest of mankind as a whole".[21] The notion of "common interest", which does not appear in its articles, would not be used in international law to describe specific objects or resources, but rather particular deeds in relation to those resources.[22] It is therefore not biodiversity that is in the common interest, but rather its conservation. In any case, the scope of this expression remains unclear, as it does not define certain key aspects, namely what conservation is and what it means for States, especially in the case of a convention with few binding provisions.

The reference to "intrinsic value" would support an eco-centric presumption, (i.e., irrespective of their usefulness to humanity) and highlight biodiversity's importance "for the evolution and for maintaining life sustaining systems of the biosphere".[23] However, the above statement and the notion of biodiversity must be calibrated against the CBD's general and clearly anthropocentric reference to "resources", when it reiterates the principle that States have the sovereign right to exploit "their *own* resources in pursuance of their *own* environmental policies",[24] or that "[r]ecognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation".[25] Sovereignty over resources is a key issue in the CBD, which is reiterated three times, one in its preamble and twice in its articles. The notion of "biological resources" also reflects this perspective when it defines them as "genetic resources, organisms

20 van Heijnsbergen, P., *International Legal Protection of Wild Fauna and Flora* (IOS Press,1997), 43.

21 Third paragraph of the preamble.

22 Brunnée, J., "Common Areas, Common Heritage and Common Concern", in Bodansky, D., Brunnée, J., Hey, E., *The Oxford Handbook and International Environmental Law* (Oxford University Press, 2007), 550-573.

23 Second recital to the preamble.

24 Article 3, emphasis added.

25 Article 15(1).

or parts thereof, populations, or any other biotic component of ecosystems of *actual or potential value or benefit to humankind*".[26] Moreover, in stating that the conservation and sustainable use of biological diversity is of "critical importance" to meet the food, health and other needs of the world's growing population,[27] the CBD makes it clear that, apart from other issues of balancing the interests of more and less developed countries, States adopt a position more closely linked to its use, with the limitation that activities carried out within their jurisdiction or under their control do not harm the environment of other States or of areas beyond any national jurisdiction.[28] In fact, the sustainable use of the components of biological diversity is clearly modulated by the phrase "as far as possible and as appropriate".[29] The impact of their "variability" on the policy of the States with regard to their resources is left to them. This is confirmed by the scope of Article 4 and by the use, once again, of the expression "as far as possible and as appropriate" when the CBD refers to the carrying out of environmental impact assessments,[30] implying that there is no need to (a) carry them out extensively, or (b) examine the possible long-term effects of activities carried out in a State. The same applies to areas beyond national jurisdiction, and the undefined "other matters of common interest for the conservation and sustainable use of biological diversity".[31] In these circumstances, it is not ambitious to declare that the conservation of biodiversity is of "common interest" without specifying what this notion means beyond the general obligations of international law and what each State intends to do according to its own policies. Indeed, the order of the CBD's preamble makes it clear that, despite the recognition of this undefined "common interest", what really counts in the end are sovereign rights over resources.

3. Sustainable use

As noted above, the CBD does not define "conservation", but it does use the notion of "sustainable use",[32] which is described as the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations. In contrast to conservation, which is concerned with biodiversity, including its variability, sustainable use is concerned with the components of biodiversity. The question is whether this distinction is crucial, since the conservation of biological diversity largely depends on how its components are used, which in turn would affect its

26 Article 2, emphasis added.

27 Twentieth preambular paragraph.

28 Article 3.

29 Articles 6 and 10, respectively.

30 Article 14.

31 Article 5.

32 Article 2.

variability. The fact that the drafters of the CBD did not wish to define the term "conservation" shows that, although it is a primary objective, considerations of the use of components of biodiversity and of resources in general have an anthropocentric purpose, as can be seen from the definition above, and in spite of the adoption of the *Addis Ababa Principles and Guidelines for the Sustainable use of Biodiversity* in 2015.[33] In effect, these principles systematise in a list what is already underlying the CBD itself. The question of what such use should consist of and at what rate remains unanswered. The only definitive criterion is that, in principle, biodiversity should not be diminished "in the long term". For this reason, the notion of "sustainable" use does not stand up to the criticism that it serves as a catch-all for any environmental policy or action. Not only is it unclear what is sustainable and in what time frame it can be determined that a use meets this criterion, but it is also unclear whether resources should be conserved for future generations even if they are not currently being used.

The CBD refers to not causing "the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations". However, by referring to biodiversity in general, the CBD does not prevent the depletion of resources if this does not reduce the ultimate variability of living organisms from any source. Moreover, the CBD does not prohibit the use of resources, as it ratifies the sovereign right of States over them, with the only limit of not causing damage outside their jurisdiction. In other words, "needs" are given priority while biodiversity is given the position of guaranteeing them. Certainly, the two go together, but the ultimate meaning of the CBD is to satisfy the needs of each generation. However, the CBD, like the general principle of sustainable development, does not clarify what a future generation is: (a) is it one that has not yet been born? (b) is it one that is present but not yet in a position to make decisions about the fate of biodiversity and resources in general? (c) Should it be the generations in each country or those of all the countries that are parties to the CBD? All these questions, which can legitimately be asked about a concept that is so often used to justify the actions of States in the case of environmental protection, call into question the elements of verification of what may constitute sustainable use.

Among the generic measures listed under the heading "Sustainable Use of Components of Biological Diversity", the CBD refers to some that are formal in nature and others that are more substantive. In the case of the former, it is doubtful whether they guarantee such sustainable use. This would require that consideration of the conservation and sustainable use of biological resources is integrated into national decision-making processes. In principle, however, such consideration would not force such decisions in a particular direction (e.g. by rejecting a project with negative environmental repercussions, or opting for a conservation policy at the expense of certain modes of transport). Among the latter, there are those that have as their direct objective the use of biological resources to avoid or minimise adverse impacts on biological diversity, without

33 Conf. 13.2 (Rev. CoP14).

the CBD providing criteria for how such use should be carried out,[34] or the protection of customary uses of biological resources in accordance with traditional cultural practices compatible with the requirements of conservation or sustainable use, which may be important in some States, but less so in others where technological development has led to the reduction, if not the disappearance, of such traditional practices. The same is true of assisting local populations to develop and implement remedial measures in degraded areas where biodiversity has been reduced, or encouraging cooperation between government authorities and the private sector in developing methods for the sustainable use of biological resources. Encouraging cooperation can certainly be beneficial, but the CBD does not specify what such cooperation should entail, beyond the usual catch-all sustainable use.

4. General measures, *in situ* and *ex situ* conservation

Despite its limitations, one of the positive aspects of the CBD is its systematic approach to outlining the measures to be taken, both in terms of general measures and of what the Convention refers to as *ex situ* and *in situ* conservation measures. As noted above, these measures need to be seen in the overall perspective underlying the CBD and the number of States that would not otherwise have adopted it. For the EU, the Convention is a reminder of essential and binding obligations required by European law. As far as general measures are concerned, the CBD provides for the elaboration of "national" strategies, plans or programmes and their integration, where possible and appropriate, into sectoral or cross-sectoral plans, programmes, and policies.[35] The problem is that the CBD does not even minimally clarify what such strategies or plans should contain for the purposes of biodiversity conservation, not even by means of an annex that could have provided guidance to States. The same applies to the principle of integrating biodiversity into other sectoral policies.[36] The CBD avoids any qualification of the level of integration, leaving this question to the States and at the pace they wish. It is thus clear that the principle of national sovereignty over the use of their own resources exercises a constant influence throughout the CBD, and that biodiversity is essentially subordinated to development considerations, which is also reflected in the absence of any reference to possible supranational plans. In any case, the elaboration of the aforesaid instruments and the development of any conservation measure require (a) the prior identification of the components of biological diversity, which the CBD lists in a general and

34 Principle 3 of the Addis Ababa Principles, states that international, national policies, laws, and regulations that distort markets which contribute to habitat degradation or otherwise generate perverse incentives that undermine conservation and sustainable use of biodiversity, should be identified, and removed or mitigated.

35 Article 6(a).

36 Article 6(b).

indicative manner in Annex I, (b) their monitoring, and (c) the identification of activities that have a detrimental impact on them.

The notion of conservation takes two different, albeit intertwined, perspectives, *in situ* and *ex situ*. The former is the basic one. Indeed, the preamble to the CBD refers to it as the "fundamental requirement for the conservation of biological diversity".[37] The second is complementary in nature.[38] This ancillary nature is due to two reasons: firstly, the traditional view of *ex situ* conservation as a kind of catch-all, and secondly, the difficulty of financing it,[39] an argument that would apply to all conservation measures. The CBD defines *in situ* conservation as "the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated and cultivated species, in the surroundings where they have developed their distinctive properties".[40] In principle, this type of conservation targets specific areas, but the CBD takes a very broad perspective, referring to ecosystems, habitats and viable populations. As noted above, the CBD aims to conserve habitats, species, and genetic resources. To this end, it relies on the concept of "protected area" (i.e. a geographically defined area that is designated or regulated and managed to achieve specific conservation objectives") without defining criteria for its selection to harmonise them between States, although it considers them fundamental to the conservation of biological diversity. The same applies to the regulation or management of biological resources important for the conservation of biological diversity, whether inside or outside protected areas, which should be carried out with the aim of ensuring their conservation and sustainable use. The notion of conservation is reflected in thirteen actions to be taken, such as the rehabilitation and restoration of degraded ecosystems or the recovery of threatened species, as well as the prevention of the introduction of alien species that threaten ecosystems, habitats or species, or the regulation and control of risks arising from the use and release of living modified organisms resulting from biotechnology that are likely to have adverse environmental effects that may affect the conservation and sustainable use of biological diversity. The penultimate item on the list is the establishment or maintenance of necessary legislation and/or other regulatory provisions for the protection of endangered species and populations.[41] From a general perspective, this should have been one of the first instruments to be mentioned, as a regulatory framework defines the starting points for public authorities and the obligations for activities that have a positive or negative impact on biodiversity.

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37 Tenth recital of the preamble.

38 Article 9(a).

39 Warren, L., "The Role of Ex Situ Measures in the Conservation of Biodiversity", in Bowman, M., and Redgwell, C., *International Law and the Conservation of Biological Diversity* (Kluwer, 1996), 129-144, 134 and 143.

40 Article 2 (twelfth paragraph) CBD.

41 Article 8(k)) CBD.

Ex situ conservation is the conservation of components of biological diversity "outside their natural habitats". Despite this precision, the preamble to the CBD states that it is to be carried out "preferably in the country of origin",[42] which does not preclude the development of activities in other areas, even in third countries, with their prior agreement. As in the case of *in situ* conservation, the CBD again provides a rather general list of five measures, which include, "as far as possible and as appropriate", the adoption of measures for the conservation of components of biological diversity, preferably in the country of origin of those components; the establishment and maintenance of facilities for the *ex situ* conservation and study of plants, animals and micro-organisms, preferably in the country of origin of genetic resources; the adoption of measures for the recovery and rehabilitation of endangered species and their reintroduction into their natural habitats under appropriate conditions; the management of collections of biological resources; and the management of biological diversity in general; the management of the collection of biological resources from natural habitats for ex situ conservation purposes, so as not to threaten ecosystems and in situ populations of species, and financial cooperation in this field. As with virtually all lists of measures, the CBD is characterised by a lack of specificity as to what might be included, at least in basic terms such as "conservation measures", as some of the measures listed above require further consideration. This is the case with the reference to genetically modified organisms. Essentially based on the precautionary principle, the CBD calls for the regulation, management or control of risks arising from the use and release of living modified organisms resulting from biotechnology that are likely to have adverse environmental effects that could affect the conservation and sustainable use of biological diversity, taking also into account risks to human health.[43]

5. Environmental Impact Assessment

One of the pillars of the CBD is the principle of precaution. Again, using the phrase "as far as possible and as appropriate", it requires the establishment of appropriate procedures requiring environmental impact assessment (EIA) of projects likely to have significant adverse effects on biological diversity, with a view to avoiding or minimising such effects.[44] Despite the plausibility of this rule, which is also reflected in the 1992 Rio Declaration,[45] and other provisions of international[46] and EU law,[47] the CBD omits any reference to

42 Eleventh recital.

43 Article 8(g)).

44 Article 14(1)(a) CBD.

45 Principle 17.

46 Craik, N., *The International Law of Environmental Impact Assessment* (Cambridge University Press, 2008), 87-131; "The Assessment of Environmental Impact", in Lees, E., Viñuales, J.E., *The Oxford Handbook of Comparative Environmental Law* (Oxford University Press, 2019), 876-899.

47 Article 6(3) HD.

potential projects, thus in principle greatly broadening the scope of its provision. However, the CBD raises the threshold at which an assessment should be carried out by using the term "significant adverse effects". However, such a potential limitation on the conduct of an EIA may be mitigated by the subject of the adverse effects, i.e. biodiversity. On the other hand, unlike other international instruments (e.g. the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction)[48] the CBD only requires that assessment procedures be put in place, but leaves other important questions to the States, such as what effect, binding or not, a negative EIA would have on any authorisations that might be granted, when and to what extent public participation is appropriate, or whether mitigation and compensation measures should be required on a mandatory basis.

In the case of programmes and policies, the CBD requires that due consideration be given to the environmental consequences of such actions. However, unlike in the case of projects, it does not strictly require a formalised procedure, nor mentions public participation in this case. As in the previous case, what is meant by "duly taken into account" is not specified.[49] However, the CBD adopts an appropriate position in that it intends to cover all types of decisions by public authorities, including those that may be more general (e.g. political) but no less important for the conservation of biodiversity, insofar as these decision-making levels adopt decisions that predetermine the actions that are subsequently taken at other lower levels of decision-making. In any case, the provision of EIA requires States to consult on activities under their jurisdiction or control that are likely to have significant adverse effects on the biological diversity of other States or of areas beyond national jurisdiction (as it happens with the UN Economic Commission for Europe Convention on Environmental Impact Assessment in a Transboundary Context, or the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction).[50] Similarly, the CBD goes beyond the stage of assessment of specific and formalised measures by referring to the prompt notification of "imminent or grave danger" to, or damage to, biological diversity in the area under the jurisdiction of other States or in areas beyond the limits of national jurisdiction to States that may be affected by such imminent danger or damage.[51] The breadth of this provision covers important issues such as invasive species. However, as with EIA, there are some weaknesses in this provision. The first relates to the specific wording of the term "imminent or grave danger". The second relates to actual knowledge of the existence of such hazards, and the third to whether it is known that they will affect the area under the jurisdiction of other States. Given that States are

48 See Articles 27-35.

49 Article 14(1)(b) CBD.

50 Article 28(2).

51 Article 14(d).

often unaware of what is happening on their own territory, it may be much more unlikely that they can (or will) have some information regarding possible effects on other jurisdictions.

6. The Case of biotechnology: the Cartagena Protocol on Biosafety and subsequent protocols

The CBD includes biotechnology within the general concept of technology. Biotechnology is defined as "any technological application that uses biological systems and living organisms or derivatives thereof to create or modify products or processes for specific uses".[52] Each Party endeavours to develop and carry out scientific research based on genetic resources provided by other Contracting Parties with the full participation of, and where possible in, such Contracting Parties.[53] This is an obligation of result, but it is left to the discretion of individual States. Effective participation in research activities is one thing, access to results and benefits is another. While results may be more concrete, the notion of benefits is much more general and difficult to specify. The most developed aspect of the CBD is the issue of the transfer, handling, and use of living modified organisms resulting from biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity.[54] It is also the only provision of the CBD that refers to the conclusion of a protocol. This led to the adoption first of the Cartagena Protocol on Biosafety (2000), secondly the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress (2010), which supplements the former Protocol, and finally the Nagoya Protocol on Access to Genetic Resources and Benefit Sharing (2010). Concerns about the potential impact of living organisms resulting from biotechnology are also reflected in a parallel provision in the CBD, regarding *in situ* conservation, addressed to each State, to establish or maintain means to regulate, manage or control the risks arising from the use and release of living modified organisms resulting from biotechnology that are likely to have adverse environmental effects that could affect the conservation and sustainable use of biological diversity, taking also into account risks to human health.[55] These provisions also prompted the US to oppose ratification of the CBD on the grounds that it would hinder the development of the biotechnology industry.[56]

The Cartagena Protocol applies to the transboundary movement, transit, handling, and use of all living modified organisms that may have adverse effects

52 Article 2.

53 Article 15(6).

54 Article 16.

55 Article 8(g).

56 The diatribe has not stopped and has had further ramifications in the context of the World Trade Organisation in the dispute on "measures affecting the approval and marketing of biotech products", concerning the EU moratorium on the approval of biotech products since October 1998. However, the Dispute Settlement Body considered neither the CBD nor the Cartagena Protocol.