EUROPEAN UNION

THE EUROPEAN PARLIAMENT **THE COUNCIL**

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REGULATION
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
ON NATURE RESTORATION AND AMENDING REGULATION (EU) 2022/869

REGULATION (EU) 2024/…
OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 24 June 2024

on nature restoration and amending Regulation (EU) 2022/869

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee[1],

Having regard to the opinion of the Committee of the Regions[2],

Acting in accordance with the ordinary legislative procedure[3],

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[1] OJ C 140, 21.04.2023, p. 46.
[2] OJ C 157, 3.5.2023, p. 38.
[3] Position of the European Parliament of 27 February 2024 (not yet published in the Official Journal) and decision of the Council of 17 June 2024.

Whereas:

(1) It is necessary to lay down rules at Union level on the restoration of ecosystems to ensure the recovery of biodiverse and resilient nature across the Union territory. Restoring ecosystems also contributes to the Union's climate change mitigation and climate change adaptation objectives.

(2) The communication of the Commission of 11 December 2019 entitled 'The European Green Deal' (the 'European Green Deal') sets out an ambitious roadmap to transform the Union into a fair and prosperous society, with a modern, resource-efficient and competitive economy, aiming to protect, conserve and enhance the Union's natural capital, and to protect the health and well-being of citizens from environment-related risks and impacts. As part of the European Green Deal, the communication of the Commission of 20 May 2020 entitled 'EU Biodiversity Strategy for 2023 Bringing nature back into our lives' sets out the EU Biodiversity Strategy for 2030.

(3) The Union and its Member States are parties to the Convention on Biological Diversity[4]. As such, they are committed to the long-term strategic vision, adopted at the tenth meeting of the Conference of the Parties to that Convention on 18-29 October 2010 by Decision X/2 Strategic Plan for Biodiversity 2011-2020, that, by 2050, biodiversity is to be valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people.

[4] OJ L 309, 13.12.1993, p. 3.

(4) The Global Biodiversity Framework, adopted at the fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity on 7-19 December 2022, sets out action-oriented global targets for urgent action over the decade to 2030. Target 1 is to ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land and sea use change; to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030 while respecting the rights of indigenous peoples and local communities, as set out in the United Nations (UN) Declaration on the Rights of Indigenous Peoples. Target 2 is to ensure that, by 2030, at least 30 % of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity. Target 11 is to restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as the regulation of air, water and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature. The Global Biodiversity Framework will enable progress towards the achievement of the outcome-oriented goals for 2050.

(5) The UN Sustainable Development Goals, in particular goals 14.2, 15.1, 15.2 and 15.3, refer to the need to ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands.

(6) In its resolution of 1 March 2019, the UN General Assembly proclaimed 2021-2030 as the UN decade on ecosystem restoration, with the aim of supporting and scaling-up efforts to prevent, halt and reverse the degradation of ecosystems worldwide and raise awareness of the importance of ecosystem restoration.

(7) The EU Biodiversity Strategy for 2030 aims to ensure that Europe's biodiversity will be put on the path to recovery by 2030 for the benefit of people, the planet, the climate and our economy. It sets out an ambitious EU Nature Restoration Plan with a number of key commitments, including a commitment to put forward a proposal for legally binding EU nature restoration targets to restore degraded ecosystems, in particular those with the most potential to capture and store carbon, and to prevent and reduce the impact of natural disasters.

(8) In its resolution of 9 June 2021 on the EU Biodiversity Strategy for 2030, the European Parliament strongly welcomed the commitment to draw up a legislative proposal with binding nature restoration targets, and furthermore considered that in addition to an overall restoration target, ecosystem-, habitat- and species-specific restoration targets should be included, covering forests, grasslands, wetlands, peatlands, pollinators, free-flowing rivers, coastal areas and marine ecosystems.

(9) In its conclusions of 23 October 2020, the Council acknowledged that preventing further decline of the current state of biodiversity and nature will be essential, but not sufficient to bring nature back into our lives. The Council reaffirmed that more ambition on nature restoration is needed, as proposed by the new EU Nature Restoration Plan, which includes measures to protect and restore biodiversity beyond protected areas. The Council also stated that it awaited a proposal for legally binding nature restoration targets, subject to an impact assessment.

(10) The EU Biodiversity Strategy for 2030 sets out a commitment 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. The criteria and guidance for the designation of additional protected areas by Member States (the 'Criteria and Guidance'), developed by the Commission in 2022, in cooperation with Member States and stakeholders, highlight that if the restored areas comply or are expected to comply, once restoration produces its full effect, with the criteria for protected areas, those restored areas should also contribute towards the Union targets on protected areas. The Criteria and Guidance also highlight that protected areas can provide an important contribution to the restoration targets in the EU Biodiversity Strategy for 2030, by creating the conditions for restoration efforts to be successful. This is particularly the case for areas which can recover naturally by stopping or limiting some of the pressures from human activities. Placing such areas, including in the marine environment, under strict protection, will, in some cases, be sufficient to lead to the recovery of the natural values they host. Moreover, it is emphasised in the Criteria and Guidance that all Member States are expected to contribute towards meeting the Union targets on protected areas set out in the EU Biodiversity Strategy for 2030, to an extent that is proportionate to the natural values they host and to the potential they have for nature restoration.

(11) The EU Biodiversity Strategy for 2030 sets out a target of ensuring 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 status will fall into that category or show a strong positive trend towards falling into that category by 2030. The guidance developed by the Commission in cooperation with Member States and stakeholders to support meeting these targets highlights that maintenance and restoration efforts are likely to be required for most of those habitats and species, either by halting their current negative trends by 2030 or by maintaining current stable or improving trends, or by preventing the decline of habitats and species with a favourable conservation status. That guidance further emphasises that those restoration efforts primarily need to be planned, implemented and coordinated at national or regional level and that, in selecting and prioritising the species and habitats to be improved by 2030, synergies with other Union and international targets, in particular environmental or climate policy targets, are to be sought.

(12) The Commission's Report on the state of nature in the European Union of 15 October 2020 (the '2020 State of Nature Report') noted that the Union has not yet managed to stem the decline of protected habitat types and species whose conservation is of concern to the Union. That decline is caused mostly by the abandonment of extensive agriculture, intensifying management practices, the modification of hydrological regimes, urbanisation and pollution as well as unsustainable forestry activities and species exploitation. Furthermore, invasive alien species and climate change represent major and growing threats to native Union fauna and flora.

(13) The European Green Deal will lead to a progressive and profound transformation of the economy of the Union and its Member States, which in turn will have a strong bearing on the Union's external action. It is important that the Union uses its trade policy and extensive network of trade agreements to engage with partners on the protection of the environment and biodiversity also globally, while promoting a level playing field.

(14) It is appropriate to set an overarching objective for ecosystem restoration to foster economic and societal transformation, the creation of high-quality jobs and sustainable growth. Biodiverse ecosystems such as wetland, freshwater, forest as well as agricultural, sparsely vegetated, marine, coastal and urban ecosystems deliver, if in good condition, a range of essential ecosystem services, and the benefits of restoring degraded ecosystems to good condition in all land and sea areas far outweigh the costs of restoration. Those services contribute to a broad range of socio-economic benefits, depending on the economic, social, cultural, regional and local characteristics.

(15) The UN Statistical Commission adopted the System of Environmental Economic Accounting - Ecosystem Accounting (SEEA EA) at its 52nd session in March 2021. SEEA EA constitutes an integrated and comprehensive statistical framework for organising data about habitats and landscapes, measuring the extent, condition and services of ecosystems, tracking changes in ecosystem assets, and linking that information to economic and other human activity.

(16) Securing biodiverse ecosystems and tackling climate change are intrinsically interlinked. Nature and nature-based solutions, including natural carbon stocks and sinks, are fundamental for fighting the climate crisis. At the same time, the climate crisis is already a driver of terrestrial and marine ecosystem change, and the Union needs to prepare for the increasing intensity, frequency and pervasiveness of its effects. The Special Report of the Intergovernmental Panel on Climate Change (IPCC) on the impacts of global warming of 1.5°C pointed out that some impacts may be long-lasting or irreversible. The IPCC Sixth Assessment Report states that restoring ecosystems will be fundamental in helping to combat climate change and also in reducing risks to food security. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) in its 2019 Global Assessment Report on Biodiversity and Ecosystem Services considered climate change a key driver of change in nature, and it expected impacts of climate change to increase over the coming decades, in some cases surpassing the impact of other drivers of ecosystem change such as changed land and sea use.

(17) Regulation (EU) 2021/1119 of the European Parliament and of the Council[5] sets out a binding objective of climate neutrality in the Union by 2050 and negative emissions thereafter, and to prioritise swift and predictable emission reductions and, at the same time, enhance removals by natural sinks. The restoration of ecosystems can make an important contribution to maintaining, managing and enhancing natural sinks and to increasing biodiversity while fighting climate change. Regulation (EU) 2021/1119 also requires relevant Union institutions and the Member States to ensure continuous progress in enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change. It also requires Member States to integrate adaptation in all policy areas and promote ecosystem-based adaptation and nature-based solutions. Nature-based solutions are solutions that are inspired and supported by nature, that are cost-effective, and that simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more, and more diverse, nature and natural features and processes into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions. Nature-based solutions need to therefore benefit biodiversity and support the delivery of a range of ecosystem services.

[5] Regulation (EU) 2021/1119 of the European Parliament and of the Council of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (‘European Climate Law’) (OJ L 243, 9.7.2021, p. 1).

(18) The communication of the Commission of 24 February 2021 entitled ‘Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change’ emphasises the need to promote nature-based solutions and recognises that cost-effective adaptation to climate change can be achieved by protecting and restoring wetlands and peatlands as well as coastal and marine ecosystems, by developing urban green spaces and installing green roofs and walls and by promoting and sustainably managing forests and farmland. Having a greater number of biodiverse ecosystems leads to higher resilience to climate change and provides more effective forms of disaster reduction and prevention.

(19) Union climate policy is being revised in order to follow the pathway set out in Regulation (EU) 2021/1119 to reduce net greenhouse gas emissions (emissions after deduction of removals) by at least 55 % compared to 1990 levels by 2030. In particular, Regulation (EU) 2023/839 of the European Parliament and of the Council[6] aims to strengthen the contribution of the land sector to the overall climate ambition for 2030 and aligns objectives regarding accounting of emissions and removals from the land use, land use change and forestry (LULUCF) sector with related policy initiatives on biodiversity. That Regulation emphasises the need for the protection and enhancement of nature-based carbon removals, for the improvement of the resilience of ecosystems to climate change, for the restoration of degraded land and ecosystems, and for rewetting peatlands. It further aims to improve the monitoring and reporting of greenhouse gas emissions and removals of land subject to protection and restoration. In that context, it is important that ecosystems in all land categories, including forests, grasslands, croplands and wetlands, are in good condition in order to be able to capture and store carbon effectively.

(20) As indicated by the communication of the Commission of 23 March 2022 entitled ‘Safeguarding food security and reinforcing the resilience of food systems’, geo-political developments have further underlined the need to safeguard the resilience of food systems. Evidence shows that restoring agro-ecosystems has positive impacts on food productivity in the long-term, and that the restoration of nature acts as an insurance policy to ensure the Union’s long-term sustainability and resilience.

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[6] Regulation (EU) 2023/839 of the European Parliament and of the Council of 19 April 2023 amending Regulation (EU) 2018/841 as regards the scope, simplifying the reporting and compliance rules, and setting out the targets of the Member States for 2030, and Regulation (EU) 2018/1999 as regards improvement in monitoring, reporting, tracking of progress and review (OJ L 107, 21.4.2023, p. 1).

(21) In the final report of the Conference on the Future of Europe of May 2022, citizens call on the Union to protect and restore biodiversity, the landscape and oceans, eliminate pollution and to foster knowledge, awareness, education and dialogues on environment, climate change, energy use, and sustainability.

(22) The restoration of ecosystems, coupled with efforts to reduce wildlife trade and consumption, will also help prevent and build up resilience to possible future communicable diseases with zoonotic potential, therefore decreasing the risk of outbreaks and pandemics, and contribute to support the Union's and global efforts to apply the One Health approach, which recognises the intrinsic connection between human health, animal health and a healthy and resilient nature.

(23) Soils are an integral part of terrestrial ecosystems. The communication of the Commission of 17 November 2021 entitled 'EU Soil Strategy for 2030 Reaping the benefits of healthy soils for people, food, nature and climate' outlines the need to restore degraded soils and enhance soil biodiversity. The Global Mechanism, a body set up under the United Nations Convention to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa[7], and the secretariat of that Convention have established the Land Degradation Neutrality Target Setting Programme to assist countries to achieve land degradation neutrality by 2030.

[7] OJ L 83, 19.3.1998, p. 3.

(24) Council Directive 92/43/EEC[8] and Directive 2009/147/EC of the European Parliament and of the Council[9] aim to ensure the long-term protection, conservation and survival of Europe's most valuable and threatened species and habitats as well as the ecosystems of which they are part. Natura 2000, which was established in 1992 and is the largest coordinated network of protected areas in the world, is the key instrument implementing the objectives of those two Directives. This Regulation should apply to the European territory of the Member States to which the Treaties apply, thereby aligning with Directives 92/43/EEC and 2009/147/EC and also with Directive 2008/56/EC of the European Parliament and of the Council[10].

(25) The Commission has developed a framework and guidance for the determination of good condition of habitat types protected under Directive 92/43/EEC and the determination of sufficient quality and quantity of the habitats of species falling within the scope of that Directive. Restoration targets for those habitat types and habitats of species can be set based on that framework and guidance. However, such restoration will not be enough to reverse biodiversity loss and for all ecosystems to recover. Therefore, in order to enhance biodiversity at the scale of wider ecosystems, additional obligations should be established that are based on specific indicators.

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8 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206, 22.7.1992, p. 7).

9 Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (OJ L 20, 26.1.2010, p. 7).

10 Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (OJ L 164, 25.6.2008, p. 19).

(26) Building on Directives 92/43/EEC and 2009/147/EC and in order to support the achievement of the objectives set out in those Directives, Member States should put in place restoration measures to ensure the recovery of protected habitats and species, including wild birds, across Union areas, also in areas that fall outside Natura 2000 sites.

(27) Directive 92/43/EEC aims to maintain and restore, at favourable conservation status, natural habitats and species of wild fauna and flora of Union interest. However, it does not set a deadline to achieve that goal. Similarly, Directive 2009/147/EC does not establish a deadline for the recovery of bird populations in the Union.

(28) Deadlines should be established for putting in place restoration measures within and outside Natura 2000 sites, in order to gradually improve the condition of protected habitat types across the Union and in order to re-establish them until the favourable reference area needed to reach favourable conservation status of those habitat types in the Union is reached. Member States should, as appropriate, until 2030, give priority to areas of habitat types that are not in good condition and that are located in Natura 2000 sites when putting in place restoration measures, given the essential role of those sites for nature conservation and the fact that under existing Union law there is already an obligation to put in place effective systems to ensure long-term effectiveness of the restoration measures in Natura 2000 sites. In order to give the necessary flexibility to Member States to make large scale restoration efforts, Member States should retain the possibility to put in place restoration measures in areas of habitat types that are not in good condition and that are located outside Natura 2000 sites, when it is justified by specific local circumstances and conditions. Moreover, it is appropriate to group habitat types according to the ecosystem to which they belong and set the time-bound and quantified area-based targets for groups of habitat types. This would allow Member States to choose which habitats to restore first within the group.

(29) The requirements set for the habitats of species that fall within the scope of Directive 92/43/EEC and for habitats of wild birds falling within the scope of Directive 2009/147/EC should be similar, having special regard to the connectivity needed between both of those habitats in order for the species populations to thrive.

(30) It is necessary that the restoration measures for habitat types are adequate and suitable for those habitat types to reach good condition and favourable reference areas are established as swiftly as possible, with a view to reaching favourable conservation status of those habitat types. It is important that the restoration measures are those necessary to meet the time-bound and quantified area-based targets. It is also necessary that the restoration measures for habitats of the species are adequate and suitable to reach sufficient quality and quantity as swiftly as possible with a view to reaching favourable conservation status of the species.

(31) Restoration measures put in place under this Regulation to restore or maintain certain habitat types listed in Annex I, such as grasslands, heath or wetland habitat types, could in certain cases require the removal of forest in order to reinstall conservation-driven management, which might include activities such as mowing or grazing. Nature restoration and halting deforestation are both important and mutually reinforcing environmental objectives. The Commission will develop guidelines, as mentioned in recital 36 of Regulation (EU) 2023/1115 of the European Parliament and the Council[11], in order to clarify the interpretation of the definition of 'agricultural use' set out in that Regulation, in particular in relation to the conversion of forest to land the purpose of which is not agricultural use.

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[11] Regulation (EU) 2023/1115 of the European Parliament and of the Council of 31 May 2023 on the making available on the Union market and the export from the Union of certain commodities and products associated with deforestation and forest degradation and repealing Regulation (EU) No 995/2010 (OJ L 150, 9.6.2023, p. 206).

(32) It is important to ensure that the restoration measures put in place under this Regulation deliver a concrete and measurable improvement in the condition of the ecosystems, both at the level of the individual areas subject to restoration and at national and Union levels.

(33) In order to ensure that the restoration measures are efficient and that their results can be measured over time, it is essential that the areas that are subject to such restoration measures, with a view to improving the condition of habitats that fall within the scope of Annex I to Directive 92/43/EEC, to re-establish those habitats and to improve their connectivity, show continuous improvement until good condition is reached.

(34) It is also essential that the areas that are subject to restoration measures with a view to improving the quality and quantity of the habitats of species that fall within the scope of Directive 92/43/EEC, as well as habitats of wild birds falling within the scope of Directive 2009/147/EC, show a continuous improvement to contribute to the achievement of a sufficient quantity and quality of the habitats of such species.

(35) It is important to ensure that the areas covered by habitat types falling within the scope of Directive 92/43/EEC that are in good condition across the European territory of Member States and of the Union as a whole are gradually increased until the favourable reference area for each habitat type is reached and at least 90 % at Member State level of such areas are in good condition, so as to allow those habitat types in the Union to reach favourable conservation status. Member States should, where duly justified and for habitat types that are very common and widespread in the Union and that cover more than 3 % of the European territory of the Member State concerned, be allowed to apply a percentage lower than 90 % for the area that is to be in good condition for individual habitat types listed in Annex I to this Regulation if that percentage would not prevent favourable conservation status for those habitat types, as determined pursuant to Article 1, point (e), of Directive 92/43/EEC, from being reached or maintained at national biogeographical level. If a Member State applies that derogation, the Member State should justify it in its national restoration plan.

(36) It is important to ensure that the quality and quantity of the habitats of species that fall within the scope of Directive 92/43/EEC, as well as of habitats of wild birds falling within the scope of Directive 2009/147/EC, across the European territory of Member States and of the Union as a whole are gradually increased until they are sufficient to ensure the long-term survival of those species.

(37) It is important that Member States put in place measures which aim to ensure that the areas covered by habitat types falling within the scope of this Regulation subject to restoration measures show a continuous improvement in condition until they reach good condition, and that Member States put in place measures which aim to ensure that once they have reached good condition, those habitat types do not significantly deteriorate, so as not to jeopardise the long-term maintenance or achievement of good condition. Not achieving those outcomes does not imply a failure to comply with the obligation to put in place measures suitable for reaching those outcomes. It is also important that Member States endeavour to make efforts with the aim of preventing significant deterioration of areas covered by such habitat types that are either already in good condition or that are not in good condition but are not yet subject to restoration measures. Such measures are important to avoid increasing the restoration needs in the future and should focus on areas of habitat types, as identified by the Member States in their national restoration plans, the restoration of which is necessary in order to meet the restoration targets. It is appropriate to consider the possibility of *force majeure*, such as natural disasters, which could result in the deterioration of areas covered by those habitat types, as well as unavoidable habitat transformations which are directly caused by climate change. Outside Natura 2000 sites it is appropriate to consider also the result of a plan or project of overriding public interest for which no less damaging alternative solutions are available. For areas subject to restoration measures, this should be determined on a case-by-case basis. For Natura 2000 sites, plans and projects are authorised in accordance with Article 6(4) of Directive 92/43/EEC. It is appropriate to ensure that Member States retain the possibility, in the absence of alternatives, to apply the non-deterioration requirement at the level of each biogeographical region of their territory for each habitat type and each habitat of species. Such possibility should be allowed under certain conditions, including that compensatory measures are taken for each significant deterioration occurrence. Where, as a desired result of a restoration measure, an area is transformed from one habitat type falling within the scope of this Regulation to another habitat type falling within the scope of this Regulation, the area should not be considered to have deteriorated.

(38) For the purposes of the derogations from the obligations of continuous improvement and non-deterioration outside Natura 2000 sites under this Regulation, plants for the production of energy from renewable sources, their connection to the grid, the related grid itself and storage assets, should be presumed by the Member States as being of overriding public interest. Member States should be able to decide to restrict the application of that presumption in duly justified and specific circumstances, such as for reasons related to national defence. In addition, Member States should be able to exempt such renewable energy projects from the obligation that no less damaging alternative solutions are available for the purposes of the application of those derogations, provided that the projects have been subject to a strategic environmental assessment or an environmental impact assessment. Considering such plants as being of overriding public interest and, where applicable, limiting the requirement to assess less damaging alternative solutions would allow such projects to benefit from a simplified assessment as regards the derogations to the assessment of overriding public interest under this Regulation.

(39) Activities which have defence or national security as their sole purpose should be given utmost priority. Therefore, when putting in place restoration measures, Member States should be able to exempt areas used for such activities, if those measures are deemed to be incompatible with the continued military use of the areas in question. In addition, for the purpose of the application of the provisions of this Regulation on derogations from the obligations of continuous improvement and non-deterioration outside Natura 2000 sites, Member States should be allowed to presume that plans and projects concerning such activities are of overriding public interest. Member States should also be able to exempt such plans and projects from the obligation that no less damaging alternative solutions are available. However, if they apply this exemption, Member States should be required to put in place measures, as far as reasonable and practicable, with the aim to mitigate the impact of those plans and projects on the habitat types.

(40) The EU Biodiversity Strategy for 2030 emphasises the need for stronger action to restore degraded marine ecosystems, including carbon-rich ecosystems and important fish spawning and nursery areas. That strategy also sets out that the Commission is to propose a new action plan to conserve fisheries resources and protect marine ecosystems.

(41) The marine habitat types listed in Annex I to Directive 92/43/EEC are defined broadly and comprise many ecologically different sub-types with different restoration potential, which makes it difficult for Member States to put in place appropriate restoration measures at the level of those habitat types. The marine habitat types listed in Annex I to that Directive should therefore be further specified by using relevant levels of the European nature information system (EUNIS) classification of marine habitats. Member States should establish favourable reference areas for reaching the favourable conservation status of each of those habitat types, in so far as those reference areas are not already addressed in other Union legislation. The group of marine soft sediment habitat types, corresponding to certain of the benthic broad habitat types specified under Directive 2008/56/EC, is widely represented in marine waters of several Member States. Member States should therefore be allowed to limit the restoration measures that are put in place gradually, to a smaller proportion of the area of these habitat types that are not in good condition, provided that this does not prevent good environmental status, as determined pursuant to Directive 2008/56/EC, from being achieved or maintained, taking into account in particular threshold values for descriptors for determining good environmental status referred to in points 1 and 6 of Annex I to that Directive, laid down in accordance with Article 9(3) of that Directive, for the extent of loss of these habitat types, for adverse effects on the condition of these habitat types and for the maximum allowable extent of those adverse effects.

(42) Where the protection of coastal and marine habitats requires that fishing or aquaculture activities be regulated, the common fisheries policy (CFP) applies. Regulation (EU) No 1380/2013 of the European Parliament and of the Council[12] provides, in particular, that the CFP is to implement the ecosystem-based approach to fisheries management so as to ensure that negative impacts of fishing activities on the marine ecosystem are minimised. That Regulation also provides that the CFP is to endeavour to ensure that aquaculture and fisheries activities avoid degradation of the marine environment.

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[12] Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (OJ L 354, 28.12.2013, p. 22).

(43) In order to achieve the objective of continuous, long-term and sustained recovery of biodiverse and resilient nature, Member States should make full use of the possibilities provided under the CFP. Member States have the possibility, within the scope of the exclusive competence of the Union with regard to conservation of marine biological resources, to take non-discriminatory measures for the conservation and management of fish stocks and the maintenance or improvement of the conservation status of marine ecosystems within the limit of 12 nautical miles. In addition, Member States that have a direct management interest, as defined in Regulation (EU) No 1380/2013, have the possibility to agree to submit joint recommendations for conservation measures necessary for compliance with obligations under Union environmental law. Where a Member State includes conservation measures necessary to contribute to the objectives of this Regulation in its national restoration plan and those conservation measures require the submission of joint recommendations, the Member State concerned should engage in consultation and submit those joint recommendations within a deadline that allows for their timely adoption before their respective deadlines, with a view to promoting the coherence between different policies on conservation of marine ecosystems. Such measures are to be assessed and adopted in accordance with the rules and procedures provided for under the CFP.

(44) Directive 2008/56/EC requires Member States to cooperate bilaterally and within regional and sub-regional cooperation mechanisms, including through Regional Sea Conventions, namely the Convention for the Protection of the Marine Environment in the North-East Atlantic[13], the Convention on the Protection of the Marine Environment in the Baltic Sea Area[14], the Convention for the Protection of Marine Environment and the Coastal Region of the Mediterranean[15] and the Convention for the Protection of the Black Sea, signed in Bucharest on 21 April 1992, as well as, where fisheries measures are concerned, in the context of the regional groups established under the CFP.

(45) It is important that restoration measures be put in place also for the habitats of certain marine species, such as sharks and rays, that fall within the scope of, for example, the Convention on the Conservation of Migratory Species of Wild Animals, signed in Bonn on 23 June 1979, or the Regional Sea Conventions' lists of endangered and threatened species, but outside the scope of Directive 92/43/EEC, as they have an important function in the ecosystem.

(46) To support the restoration and non-deterioration of terrestrial, freshwater, coastal and marine habitats, Member States have the possibility to designate additional areas as 'protected areas' or 'strictly protected areas', to implement other effective area-based conservation measures, and to promote private land conservation measures.

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13 OJ L 104, 3.4.1998, p. 2.
14 OJ L 73, 16.3.1994, p. 20.
15 OJ L 240, 19.9.1977, p. 3.

(47) Urban ecosystems represent around 22 % of the land surface of the Union and constitute the area in which the majority of the citizens of the Union live. Urban green spaces include, inter alia, urban forests, parks and gardens, urban farms, tree-lined streets, urban meadows and urban hedges. Urban ecosystems, like the other ecosystems addressed in this Regulation, provide important habitats for biodiversity, in particular plants, birds and insects, including pollinators. They also provide many other vital ecosystem services, including natural disaster risk reduction and control such as for floods and heat island effects, cooling, recreation, water and air filtration, as well as climate change mitigation and adaptation. Increasing urban green space is an important parameter for measuring the increase of the ability of urban ecosystems to provide those vital services. Increasing green cover in a given urban area slows water run-off thus reducing river pollution risk from storm water overflow and helps keep summer temperatures down, building climate resilience, and provides additional space for nature to thrive. Increasing the level of urban green space will, in many cases, improve the health of the urban ecosystem. In turn, healthy urban ecosystems are essential for supporting the health of other key European ecosystems, for example by connecting natural areas in the surrounding countryside, improving river health away from the city, providing a haven and breeding ground for bird and pollinator species linked to agricultural and forest habitats, as well as providing important habitats for migrating birds.

(48) Actions to ensure that the coverage of urban green spaces, in particular trees, will no longer be at risk of being reduced need to be strongly enhanced. In order to ensure that urban green spaces continue to provide the necessary ecosystem services, their loss should be stopped and they should be restored and increased, inter alia by integrating green infrastructure and nature-based solutions, such as green roofs and green walls, in the design of buildings. Such integration can contribute to maintaining and increasing not only the area of urban green space but also, if trees are included, the area of urban tree canopy cover.

(49) Scientific evidence suggests that artificial light negatively impacts biodiversity. Artificial light can also impact human health. When preparing their national restoration plans under this Regulation, Member States should be able to consider to stop, reduce or remediate light pollution in all ecosystems.

(50) The EU Biodiversity Strategy for 2030 requires greater efforts to be made to restore freshwater ecosystems and the natural functions of rivers. The restoration of freshwater ecosystems should include efforts to restore the natural connectivity of rivers as well as their riparian areas and floodplains, including through the removal of artificial barriers, in order to support reaching of favourable conservation status for rivers, lakes and alluvial habitats and species living in those habitats protected by Directives 92/43/EEC and 2009/147/EC, and the achievement of one of the key objectives of the EU Biodiversity Strategy for 2030, namely, the restoration of at least 25 000 km of free-flowing rivers, as compared to 2020 when the EU Biodiversity Strategy for 2030 was adopted. When removing barriers, Member States should primarily address obsolete barriers, which are those that are no longer needed for renewable energy generation, inland navigation, water supply or other uses.

(51) In the Union, pollinators have dramatically declined in recent decades, with one in three bee species and butterfly species in decline and one in ten such species on the verge of extinction. Pollinators are essential for the functioning of terrestrial ecosystems, human wellbeing and food security, by pollinating wild and cultivated plants. The 2021 Report based on the output of the Integrated system for Natural Capital Accounting (INCA) project, jointly undertaken by the Commission services and the European Environment Agency (EEA),shows that almost EUR 5 000 000 000 of the Union's annual agricultural output is directly attributed to insect pollinators.

(52) With its communication of 1 June 2018, the Commission launched the EU Pollinators Initiative in response to calls from the European Parliament and from the Council to address the decline of pollinators. The progress report of 27 May 2021 on the implementation of that initiativeshowed that significant challenges remain in tackling the drivers of pollinator decline, including on the use of pesticides. Both the European Parliament, in its resolution of 9 of June, and the Council, in its conclusions of 17 December 2020 on the European Court of Auditors' Special Report No 15/2020, have called for stronger action to tackle pollinator decline, the establishment of a Union-wide monitoring framework for pollinators, and clear objectives and indicators regarding the commitment to reverse the decline of pollinators. In its Special Report issued in 2020, the European Court of Auditors recommended that the Commission set up appropriate governance and monitoring mechanisms for actions to address threats to pollinators. In its communication of 24 January 2023, the Commission presented a revised EU Pollinators Initiative entitled 'Revision of the EU Pollinators Initiative A new deal for pollinators', which sets out actions to be taken by the Union and its Member States to reverse the decline of pollinators by 2030.

(53) The proposal for a Regulation of the European Parliament and of the Council on the sustainable use of plant protection products aims to regulate one of the drivers of pollinator decline by prohibiting the use of pesticides in ecologically sensitive areas, many of which are covered by this Regulation, for example areas sustaining pollinator species which the European Red Lists of species classify as being threatened with extinction.

(54) Sustainable, resilient and biodiverse agricultural ecosystems are needed to provide safe, sustainable, nutritious and affordable food. Biodiversity-rich agricultural ecosystems also increase agriculture's resilience to climate change and environmental risks, while ensuring food safety and security and creating new jobs in rural areas, in particular jobs linked to organic farming as well as rural tourism and recreation. Therefore, the Union needs to improve the biodiversity of its agricultural lands, through a variety of existing practices that are beneficial to or compatible with biodiversity enhancement, including through the use of extensive agriculture. Extensive agriculture is vital for the maintenance of many species and habitats in biodiversity-rich areas. There are many extensive agricultural practices which have multiple and significant benefits on the protection of biodiversity, ecosystem services and landscape features, such as precision agriculture, organic farming, agro-ecology, agroforestry and low intensity permanent grassland. Such practices do not intend to stop agricultural land-use but rather to adapt this type of use for the benefit of the long-term functioning and productivity of the agricultural ecosystems. Financially attractive funding schemes for owners, farmers and other land-managers to voluntarily engage in such practices are important in delivering the long-term benefits of restoration.

(55) Restoration measures need to be put in place to enhance the biodiversity of agricultural ecosystems across the Union, including in the areas not covered by habitat types that fall within the scope of Directive 92/43/EEC. In the absence of a common method for assessing the condition of agricultural ecosystems that would allow setting specific restoration targets for agricultural ecosystems, it is appropriate to set a general obligation to improve biodiversity in agricultural ecosystems and measure the fulfilment of that obligation on the basis of a selection of indicators out of the grassland butterfly index, the stock of organic carbon in cropland mineral soils or the share of agricultural land with high diversity landscape features.

(56) Since farmland birds are well-known and widely recognised key indicators of the health of agricultural ecosystems, it is appropriate to set targets for their recovery. The obligation to meet such targets should apply to Member States, not to individual farmers. Member States should meet those targets by putting in place effective restoration measures on farmland, working with and supporting farmers and other stakeholders for their design and implementation on the ground.

(57) High-diversity landscape features on agricultural land, including buffer strips, rotational or non-rotational fallow land, hedgerows, individual or groups of trees, tree rows, field margins, patches, ditches, streams, small wetlands, terraces, cairns, stonewalls, small ponds and cultural features, provide space for wild plants and animals, including pollinators, prevent soil erosion and depletion, filter air and water, support climate change mitigation and adaptation, and agricultural productivity of pollination-dependent crops. Productive features can also be considered as high-diversity landscape features under certain conditions.

(58) The common agricultural policy (CAP) aims to support and strengthen environmental protection, including biodiversity. The policy has among its specific objectives to contribute to halting and reversing biodiversity loss, enhance ecosystem services and preserve habitats and landscapes. The new CAP conditionality standard Nr. 8 on Good Agricultural and Environmental Conditions of Lands (GAEC 8), set out in Annex III to Regulation (EU) 2021/2115 of the European Parliament and of the Council[16], requires beneficiaries of area-related payments to have at least 4 % of arable land at farm level devoted to non-productive areas and features, such as land lying fallow, and to retain existing landscape features. The 4 % share that is to be attributed to compliance with the GAEC 8 standard can be reduced to 3 % if certain pre-requisites are met. That obligation will contribute to Member States reaching a positive trend in high-diversity landscape features on agricultural land. In addition, under the CAP, Member States have the possibility to set up eco-schemes for agricultural practices carried out by farmers on agricultural areas that may include maintenance and creation of landscape features or non-productive areas. Similarly, in their CAP strategic plans, Member States can also include agri-environment-climate commitments, including the enhanced management of landscape features going beyond the GAEC 8 standard or eco-schemes. Projects under the sub-programme 'Nature and Biodiversity' of the LIFE Programme, established by Regulation (EU) 2021/783 of the European Parliament and of the Council[17], will also help to put Europe's biodiversity on agricultural land on a path to recovery by 2030, by supporting the implementation of Directives 92/43/EEC and 2009/147/EC as well as the EU Biodiversity Strategy for 2030.

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16 Regulation (EU) 2021/2115 of the European Parliament and of the Council of 2 December 2021 establishing rules on support for strategic plans to be drawn up by Member States under the common agricultural policy (CAP Strategic Plans) and financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013 (OJ L 435, 6.12.2021, p. 1).

17 Regulation (EU) 2021/783 of the European Parliament and of the Council of 29 April 2021 establishing a Programme for the Environment and Climate Action (LIFE), and repealing Regulation (EU) No 1293/2013 (OJ L 172, 17.5.2021, p. 53).

(59) Restoration and rewetting of organic soils, as defined in 2006 IPCC Guidelines for National Greenhouse Gas Inventories, in agricultural use, i.e. under grassland and cropland use, constituting drained peatlands help achieve significant biodiversity benefits, an important reduction of greenhouse gas emissions and other environmental benefits, while at the same time contributing to a diverse agricultural landscape. Member States can choose from a wide range of restoration measures for drained peatlands in agricultural use, spanning from converting cropland to permanent grassland and extensification measures accompanied by reduced drainage, to full rewetting with the opportunity of paludicultural use, or the establishment of peat-forming vegetation. The most significant climate benefits are created by restoring and rewetting cropland followed by the restoration of intensive grassland. To allow for a flexible implementation of the restoration target for drained peatlands under agricultural use, Member States should be able to count the restoration measures and rewetting of drained peatlands in areas of peat extraction sites as well as, to a certain extent, the restoration and rewetting of drained peatlands under other land uses, for example forest, as contributing to meeting of the restoration targets for drained peatlands under agricultural use. Where duly justified, if rewetting of drained peatland under agricultural use cannot be implemented due to considerable negative impacts on buildings, infrastructure, climate adaptation or other public interests, and it is not feasible to rewet peatlands under other land uses, it should be possible for the Member States to reduce the extent of the rewetting of peatlands.

(60) In order to reap the full biodiversity benefits, restoration and rewetting of areas of drained peatland should extend beyond the areas of wetlands habitat types listed in Annex I to Directive 92/43/EEC that are to be restored and re-established. Data about the extent of organic soils as well as their greenhouse gas emissions and removals are monitored and made available by LULUCF sector reporting in national greenhouse gas inventories by Member States, submitted under the UN Framework Convention on Climate Change. Restored and rewetted peatlands can continue to be used productively in alternative ways. For example, paludiculture, the practice of farming on wet peatlands, can include cultivation of various types of reeds, certain forms of timber, blueberry and cranberry cultivation, sphagnum farming and grazing with water buffaloes. Such practices should be based on the principles of sustainable management and aimed at enhancing biodiversity so that they can have a high value both financially and ecologically. Paludiculture can also be beneficial to several species which are endangered in the Union and can also facilitate the connectivity of wetland areas and of associated species populations in the Union. Funding for measures to restore and rewet drained peatlands and to compensate possible losses of income can come from a wide range of sources, including expenditure under the Union budget and Union financing programmes.

(61) The new EU Forest Strategy for 2030, set out in the communication of the Commission of 16 July 2021, outlined the need to restore forest biodiversity. Forests and other wooded land cover over 43,5 % of the Union's land space. Forest ecosystems that host rich biodiversity are vulnerable to climate change but are also a natural ally in adapting to and fighting climate change and climate-related risks, including through their carbon-stock and carbon-sink functions, and provide many other vital ecosystem services and benefits, such as the provision of timber and wood, food and other non-wood products, climate regulation, soil stabilisation and erosion control, and the purification of air and water.

(62) Restoration measures need to be put in place to enhance the biodiversity of forest ecosystems across the Union, including in the areas not covered by habitat types falling within the scope of Directive 92/43/EEC. In the absence of a common method for assessing the condition of forest ecosystems that would allow for the setting of specific restoration targets for forest ecosystems, it is appropriate to set a general obligation to improve biodiversity in forest ecosystems and measure the fulfilment of that obligation on the basis of the common forest bird index and of a selection of other indicators, out of standing deadwood, lying deadwood, share of forests with uneven-aged structure, forest connectivity, stock of organic carbon, share of forests dominated by native tree species and tree species diversity.

(63) When planning and putting in place the restoration measures necessary to enhance biodiversity in forest ecosystems and when setting satisfactory levels for biodiversity indicators for forests, Member States should take into account the risks of forest fire, based on local circumstances. Member States should make use of best practices to reduce such risks, particularly as described in the Commission's Guidelines on land-based wildfire prevention issued in 2021.

(64) The EU Biodiversity Strategy for 2030 sets out a commitment to plant at least 3 billion additional trees in the Union by 2030, in full respect of ecological principles. The New EU Forest Strategy for 2030, set out in the communication of the Commission of 16 July 2021, includes a roadmap for the implementation of that commitment based on the overall principle of planting and growing the right tree in the right place and for the right purpose. An online tree counter is available as a tool to record contributions to and progress on the commitment and Member States should document trees planted in the tool. As set out in the EU Biodiversity Strategy for 2030 and in the roadmap in the New EU Forest Strategy for 2030, on 17 March 2023 the Commission issued Guidelines on biodiversity-friendly afforestation, reforestation and tree planting. Those Guidelines, which articulate the framework of ecological principles to consider, aim to contribute to the commitment and, through this, to support the implementation of this Regulation.

(65) Restoration targets and obligations for habitats and species protected under Directives 92/43/EEC and 2009/147/EC for pollinators and for freshwater, urban, agricultural and forest ecosystems should be complementary and work in synergy, with a view to achieving the overarching objective of restoring ecosystems across the Member States' land and sea areas. The restoration measures required to meet one specific target will, in many cases, contribute to meeting other targets or fulfilling other obligations. Member States should therefore plan restoration measures strategically with a view to maximising their effectiveness in contributing to the recovery of nature across the Union. Restoration measures should also be planned in such manner that they address climate change mitigation and climate change adaptation and the prevention and control of the impact of natural disasters, as well as land degradation. They should aim to optimise the ecological, economic and social functions of ecosystems, including their productivity potential, taking into account their contribution to the sustainable development of the relevant regions and communities. In order to avoid unintended consequences, Member States should also consider the foreseeable socio-economic impacts and estimated benefits of the implementation of the restoration measures. It is important that Member States prepare detailed national restoration plans based on the best available scientific evidence. Documented records on historic distribution and area, as well as on the projected changes to environmental conditions due to climate change, should inform the determination of favourable reference areas for habitat types. Furthermore, it is important that the public is given early and effective opportunities to participate in the preparation of the plans. Member States should take account of the specific conditions and needs in their territory, in order for the plans to respond to the relevant pressures, threats and drivers of biodiversity loss, and should cooperate to ensure restoration and connectivity across borders.

(66) To ensure synergies between the different measures that have been, and are to be put in place to protect, conserve and restore nature in the Union, Member States should take into account, when preparing their national restoration plans: the conservation measures established for Natura 2000 sites and the prioritised action frameworks prepared in accordance with Directives 92/43/EEC and 2009/147/EC; measures for achieving good ecological and chemical status of water bodies included in river basin management plans prepared in accordance with Directive 2000/60/EC of the European Parliament and of the Council[18]; marine strategies for achieving good environmental status for all Union marine regions prepared in accordance with Directive 2008/56/EC; national air pollution control programmes prepared under Directive (EU) 2016/2284 of the European Parliament and of the Council[19]; national biodiversity strategies and action plans developed in accordance with Article 6 of the Convention on Biological Diversity, as well as conservation measures adopted in accordance with Regulation (EU) No 1380/2013 and technical measures adopted in accordance with Regulation (EU) 2019/1241 of the European Parliament and of the Council[20].

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[18] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

[19] Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 on the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (OJ L 344, 17.12.2016, p. 1).

[20] Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005 (OJ L 198, 25.7.2019, p. 105).

(67) In order to ensure coherence between the objectives of this Regulation and Directive (EU) 2018/2001 of the European Parliament and of the Council[21], Regulation (EU) 2018/1999 of the European Parliament and of the Council[22] and Directive 98/70/EC of the European Parliament and of the Council[23] as regards the promotion of energy from renewable sources, in particular, during the preparation of national restoration plans, Member States should take account of the potential for renewable energy projects to contribute towards fulfilling nature restoration objectives.

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21 Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

22 Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009 of the European Parliament and of the Council, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU of the European Parliament and of the Council, Council Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 of the European Parliament and of the Council (OJ L 328, 21.12.2018, p. 1).

23 Directive 98/70/EC of the European Parliament and of the Council of 13 October 1998 relating to the quality of petrol and diesel fuels and amending Council Directive 93/12/EEC (OJ L 350, 28.12.1998, p. 58).

(68) Considering the importance of addressing consistently the dual challenges of biodiversity loss and climate change, the restoration of biodiversity should take into account the deployment of renewable energy and vice versa. It should be possible to combine restoration activities and the deployment of renewable energy projects, wherever possible, including in renewables acceleration areas and dedicated grid areas. Directive (EU) 2018/2001 requires Member States to carry out a coordinated mapping for the deployment of renewable energy in their territory in order to identify the domestic potential and the available land surface, sub-surface, sea or inland water that are necessary for the installation of renewable energy plants and their related infrastructure, such as grid and storage facilities, including thermal storage, that are required in order to fulfil at least their national contributions towards the revised 2030 renewable energy target. Such necessary areas, including the existing plants and cooperation mechanisms, are to be commensurate with the estimated trajectories and total planned installed capacity by renewable energy technology set in the national energy and climate plans. Member States should designate a sub-set of such areas as renewables acceleration areas. Renewables acceleration areas are specific locations, whether on land or sea, that are particularly suitable for the installation of plants for the production of energy from renewable sources, where the deployment of a specific type of renewable energy is not expected to have significant environmental impacts, in view of the particularities of the selected territory. Member States are to give priority to artificial and built surfaces, such as rooftops and facades of buildings, transport infrastructure and their direct surroundings, parking areas, farms, waste sites, industrial sites, mines, artificial inland water bodies, lakes or reservoirs, and, where appropriate, urban waste water treatment sites, as well as degraded land not usable for agriculture.

Directive (EU) 2018/2001 also establishes that Member States be allowed to adopt a plan or plans to designate dedicated infrastructure areas for the development of grid and storage projects that are necessary to integrate renewable energy into the electricity system, where such development is not expected to have a significant environmental impact, such an impact can be duly mitigated or, where that is not possible, compensated for. The aim of such areas is to be to support and complement the renewables acceleration areas. In the designation of renewables acceleration areas and dedicated infrastructure areas, Member States are to avoid protected areas and consider their national restoration plans. Member States should coordinate the development of national restoration plans with the mapping of areas that are required in order to meet at least their national contribution towards the 2030 renewable energy target and, where relevant, with the designation of the renewables acceleration areas and dedicated grid areas. During the preparation of the national restoration plans, Member States should ensure synergies with the build-up of renewable energy and energy infrastructure and with renewables acceleration areas and dedicated grid areas that have already been designated and ensure that the functioning of those areas, including the permit-granting procedures applicable in those areas provided for by Directive (EU) 2018/2001, remain unchanged.

(69) In order to ensure synergies with restoration measures that have already been planned or put in place in Member States, the national restoration plans should recognise those restoration measures and take them into account. In light of the urgency signalled by the IPCC Sixth Assessment Report for taking action on the restoration of degraded ecosystems, Member States should implement those measures in parallel with the preparation of the restoration plans.

(70) The national restoration plans and the measures to restore habitats, as well as the measures to prevent habitats from deteriorating, should also take into account the results of research projects relevant for assessing the condition of ecosystems, identifying and putting in place restoration measures, and monitoring purposes. Where appropriate, they should also take into account the diversity of situations in the various regions of the Union, in accordance with Article 191(2) of the Treaty on the Functioning of the European Union (TFEU), such as social, economic and cultural requirements and regional and local characteristics, including population density.

(71) It is appropriate to take into account the specific situation of the Union's outermost regions, as listed in Article 349 TFEU, which provides for specific measures to support those regions. As envisaged in the EU Biodiversity Strategy for 2030, particular focus should be placed on protecting and restoring the outermost regions' ecosystems, given their exceptionally rich biodiversity value. At the same time, the associated costs for protecting and restoring those ecosystems and the remoteness, insularity, small size, difficult topography and climate of the outermost regions should be taken into account, in particular when preparing the national restoration plans. Member States are encouraged to include, on a voluntary basis, specific restoration measures in those outermost regions that do not fall within the scope of this Regulation.

(72) The EEA should support Member States in preparing their national restoration plans, as well as in monitoring progress towards meeting the restoration targets and fulfilling the obligations. The Commission should assess whether the national restoration plans are adequate for meeting those targets and fulfilling those obligations, for fulfilling the Union's overarching objectives to jointly cover, as a Union target, throughout the areas and ecosystems within the scope of this Regulation, at least 20 % of land areas, and at least 20 % of sea areas by 2030, and all ecosystems in need of restoration by 2050, the objectives to restore at least 25 000 km of rivers into free-flowing rivers in the Union by 2030, as well as for contributing to the commitment of planting at least 3 billion additional trees in the Union by 2030.

(73) The 2020 State of Nature Report has shown that a substantial share of the information reported by Member States in accordance with Article 17 of Directive 92/43/EEC and Article 12 of Directive 2009/147/EC, in particular on the conservation status and trends of the habitats and species they protect, comes from partial surveys or is based only on expert judgment. That report also showed that the status of several habitat types and species protected under Directive 92/43/EEC is still unknown. Filling in those knowledge gaps and investing in monitoring and surveillance are necessary in order to underpin robust and science-based national restoration plans. In order to increase the timeliness, effectiveness and coherence of various monitoring methods, monitoring and surveillance should make best possible use of the results of Union-funded research and innovation projects, new technologies, such as *in-situ* monitoring and remote sensing using space data and services delivered under the EGNOS, Galileo and Copernicus components of the Union Space Programme, established by Regulation (EU) 2021/696 of the European Parliament and of the Council[24]. The EU missions 'Restore Our Ocean and Waters', 'Adaptation to Climate Change', and 'A Soil Deal for Europe', set out in the communication from the Commission of 29 September 2021 on European Missions, will support the implementation of the restoration targets.

[24] Regulation (EU) 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the Union Space Programme and the European Union Agency for the Space Programme and repealing Regulations (EU) No 912/2010, (EU) No 1285/2013 and (EU) No 377/2014 and Decision No 541/2014/EU (OJ L 170, 12.5.2021, p. 69).

(74) Considering the particular technical and financial challenges associated with mapping and monitoring marine environments, Member States should be able, as a complement to information reported in accordance with Article 17 of Directive 92/43/EEC and in accordance with Article 17 of Directive 2008/56/EC, to use information about pressures and threats or other relevant information as a basis for extrapolation when assessing the condition of marine habitats listed in Annex II to this Regulation. It should also be possible to use such an approach as a basis for planning restoration measures in marine habitats in accordance with this Regulation. The overall assessment of the condition of marine habitats listed in Annex II to this Regulation should be based on the best available knowledge and latest technical and scientific progress.

(75) In order to ensure the monitoring of the progress in implementing the national restoration plans, the restoration measures put in place, the areas subject to restoration measures and the data on the inventory of barriers to river continuity, a system should be introduced requiring Member States to set up, keep up-to-date and make accessible relevant data on results from such monitoring. The electronic reporting of data to the Commission should make use of EEA's Reportnet system and should aim to limit the administrative burden on all entities as far as possible. To ensure an appropriate infrastructure for public access, reporting and data-sharing between public authorities, Member States should, where relevant, base the data specifications on those referred to in Directives 2003/4/EC[25], 2007/2/EC[26] and (EU) 2019/1024[27] of the European Parliament and of the Council.

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[25] Directive 2003/4/EC of the European Parliament and of the Council of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC (OJ L 41, 14.2.2003, p. 26).

[26] Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE) (OJ L 108, 25.4.2007, p. 1).

[27] Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information (OJ L 172, 26.6.2019, p. 56).

(76) In order to ensure an effective implementation of this Regulation, the Commission should support Member States upon request through the Technical Support Instrument, established under Regulation (EU) 2021/240 of the European Parliament and of the Council[28], which provides for tailor-made technical support to design and implement reforms. The technical support provided under that instrument involves, for example, strengthening the administrative capacity, harmonising the legislative frameworks and sharing relevant best practices.

(77) The Commission should report on the progress made by Member States towards meeting the restoration targets and fulfilling the obligations of this Regulation on the basis of Union-wide progress reports drawn up by the EEA as well as other analysis and reports made available by Member States in relevant policy areas such as nature, marine and water policy.

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[28] Regulation (EU) 2021/240 of the European Parliament and of the Council of 10 February 2021 establishing a Technical Support Instrument (OJ L 57, 18.2.2021, p. 1).

(78) To ensure meeting the targets and fulfilling the obligations set out in this Regulation, it is of utmost importance that adequate private and public investments are made in restoration. Member States should therefore integrate in their national budgets expenditure for biodiversity objectives, including in relation to opportunity and transition costs resulting from the implementation of the national restoration plans, and reflect how Union funding is used. Regarding Union funding, expenditure under the Union budget and Union financing programmes, such as the LIFE Programme, the European Maritime Fisheries and Aquaculture Fund (EMFAF), established by Regulation (EU) 2021/1139 of the European Parliament and of the Council[29], the European Agricultural Fund for Rural Development (EAFRD) and the European Agricultural Guarantee Fund (EAGF), both established by Regulation (EU) 2020/2220 of the European Parliament and of the Council[30], the European Regional Development Fund (ERDF) and the Cohesion Fund, both established by Regulation (EU) 2021/1058 of the European Parliament and of the Council[31]

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[29] Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004 (OJ L 247, 13.7.2021, p. 1).

[30] Regulation (EU) 2020/2220 of the European Parliament and of the Council of 23 December 2020 laying down certain transitional provisions for support from the European Agricultural Fund for Rural Development (EAFRD) and from the European Agricultural Guarantee Fund (EAGF) in the years 2021 and 2022 and amending Regulations (EU) No 1305/2013, (EU) No 1306/2013 and (EU) No 1307/2013 as regards resources and application in the years 2021 and 2022 and Regulation (EU) No 1308/2013 as regards resources and the distribution of such support in respect of the years 2021 and 2022 (OJ L 437, 28.12.2020, p. 1).

[31] Regulation (EU) 2021/1058 of the European Parliament and of the Council of 24 June 2021 on the European Regional Development Fund and on the Cohesion Fund (OJ L 231, 30.6.2021, p. 60).

and the Just Transition Fund, established by Regulation (EU) 2021/1056 of the European Parliament and of the Council[32], as well as Horizon Europe – the Framework Programme for Research and Innovation, established by Regulation (EU) 2021/695 of the European Parliament and of the Council[33], contributes to biodiversity objectives with the ambition to dedicate 7,5 % in 2024, and 10 % in 2026 and in 2027 of annual spending under the multiannual financial framework for the years 2021 to 2027 laid down in Council Regulation (EU, Euratom) 2020/2093[34] (the 'MFF 2021-2027') to biodiversity objectives. The Recovery and Resilience Facility, established by Regulation (EU) 2021/241 of the European Parliament and of the Council[35], is a further source of funding for the protection and restoration of biodiversity and ecosystems. With reference to the LIFE Programme, special attention should be given to the appropriate use of the strategic nature projects as a specific tool that could support the implementation of this Regulation, by way of mainstreaming available financial resources in an effective and efficient way.

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32 Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund (OJ L 231, 30.06.2021, p. 1).

33 Regulation (EU) 2021/695 of the European Parliament and of the Council of 28 April 2021 establishing Horizon Europe – the Framework Programme for Research and Innovation, laying down its rules for participation and dissemination, and repealing Regulations (EU) No 1290/2013 and (EU) No 1291/2013 (OJ L 170, 12.5.2021, p. 1).

34 Council Regulation (EU, Euratom) 2020/2093 of 17 December 2020 laying down the multiannual financial framework for the years 2021 to 2027 (OJ L 433 I, 22.12.2020, p. 11).

35 Regulation (EU) 2021/241 of the European Parliament and of the Council of 12 February 2021 establishing the Recovery and Resilience Facility (OJ L 57, 18.2.2021, p. 17).

(79) The preparation of the national restoration plans should not imply an obligation for Member States to re-programme any funding under the CAP, the CFP or other agricultural and fisheries funding programmes or instruments under the MFF 2021-2027 in order to implement this Regulation.

(80) A range of Union, national and private initiatives are available to stimulate private financing, such as the InvestEU Programme, established by Regulation (EU) 2021/523 of the European Parliament and of the Council[36], which offers opportunities to mobilise public and private finance to support, inter alia, the enhancement of nature and biodiversity by means of green and blue infrastructure projects, and carbon farming as a green business-model. Funding nature restoration measures on the ground, through private or public financing, including result-based support and innovative schemes such as carbon removal certification schemes, could be promoted. Private investment could also be incentivised through public investment schemes, including financial instruments, subsidies and other instruments, provided State aid rules are complied with.

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[36] Regulation (EU) 2021/523 of the European Parliament and of the Council of 24 March 2021 establishing the InvestEU Programme and amending Regulation (EU) 2015/1017 (OJ L 107, 26.3.2021, p. 30).

(81) To ensure the implementation of this Regulation, adequate private and public investments for nature restoration measures are essential. Therefore, the Commission should, within 12 months from the date of entry into force of this Regulation and in consultation with Member States, present a report with an analysis identifying any gaps in implementing this Regulation. That report should be accompanied, where appropriate, by proposals for adequate measures, including financial measures to address the gaps identified, such as the establishment of dedicated funding and without prejudging the prerogatives of the co-legislators for the adoption of the multiannual financial framework post 2027.

(82) According to settled case law of the Court of Justice of the European Union, under the principle of sincere cooperation laid down in Article 4(3) of the Treaty on European Union (TEU), it is for the courts of the Member States to ensure judicial protection of a person's rights under Union law. Furthermore, Article 19(1) TEU requires Member States to provide remedies sufficient to ensure effective judicial protection in the fields covered by Union law. The Union and the Member States are parties to the UN Economic Commission for Europe Convention on access to information, public participation in decision-making and access to justice in environmental matters[37] (the 'Aarhus Convention'). Under the Aarhus Convention, Member States are to ensure that, in accordance with the relevant national legal system, members of the public concerned have access to justice.

[37] OJ L 124, 17.5.2005, p. 4.

(83) Member States should promote a fair and cross-society approach in the preparation and implementation of their national restoration plans. They should put in place the necessary measures to engage local and regional authorities, landowners and land users and their associations, civil society organisations, business community, research and education communities, farmers, fishers, foresters, investors and other relevant stakeholders and the general public, in all phases of the preparation, review and implementation of the national restoration plans, and to foster dialogue and the diffusion of science-based information about biodiversity and the benefits of restoration.

(84) Pursuant to Regulation (EU) 2021/2115, CAP strategic plans are meant to contribute to the achievement of, and be consistent with, the long-term national targets set out in or deriving from, the legislative acts listed in Annex XIII to that Regulation. This Regulation should be taken into account when, in accordance with Article 159 of Regulation (EU) 2021/2115, the Commission reviews, by 31 December 2025, the list set out in Annex XIII to that Regulation.

(85) In line with the commitment in the 8th Environment Action Programme, set out in Decision (EU) 2022/591 of the European Parliament and of the Council[38], Member States are to phase out environmentally harmful subsidies at national level, making the best use of market-based instruments and green budgeting and financing tools, including those required to ensure a socially fair transition, and supporting businesses and other stakeholders in developing standardised natural capital accounting practices.

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[38] Decision (EU) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a General Union Environment Action Programme to 2030 (OJ L 114, 12.4.2022, p. 22).

(86) In order to ensure the necessary adaptation of this Regulation, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission in respect of supplementing this Regulation by establishing and updating a science-based method for monitoring pollinator diversity and populations and in respect of amending Annexes I to VII to this Regulation by adapting to technical and scientific progress the groups and lists of habitat types, the list of marine species, the list of species used for the common farmland bird index, the description, unit and methodology of biodiversity indicators for agricultural ecosystems and forest ecosystems and the list of examples of restoration measures, to take into account experience gained from the application of this Regulation or to ensure consistency with the EUNIS habitat types. It is of particular importance that the Commission carry out impact assessments and appropriate consultations during its preparatory work, including at expert level, in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making[39]. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to meetings of Commission expert groups dealing with the preparation of delegated acts.

[39] OJ L 123, 12.5.2016, p. 1.

(87) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers should be conferred on the Commission in respect of specifying the methods for monitoring the indicators for agricultural ecosystems listed in Annex IV to this Regulation and the indicators for forest ecosystems listed in Annex VI to this Regulation, establishing guiding frameworks for setting the satisfactory levels for urban green space, for urban tree canopy cover in urban ecosystems, for pollinators, for biodiversity indicators for agricultural ecosystems listed in Annex IV to this Regulation and for indicators for forest ecosystems listed in Annex VI to this Regulation, establishing a uniform format for the national restoration plans, and establishing the format, structure and detailed arrangements for reporting data and information to the Commission electronically. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and the Council[40].

(88) In order to allow for a rapid and effective response when an unforeseeable, exceptional and unprovoked event occurs that is outside the control of the Union, with severe Union-wide consequences on the availability of land required to secure sufficient agricultural production for Union food consumption, implementing powers should be conferred on the Commission in respect of the temporary suspension of the application of the relevant provisions of this Regulation to the extent and for such period as is strictly necessary, up to a maximum of 12 months, while preserving the objectives of this Regulation. Those powers should be exercised in accordance with Regulation (EU) No 182/2011.

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[40] Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

(89) The Commission should carry out an evaluation of this Regulation. Pursuant to the Interinstitutional Agreement of 13 April 2016 on Better Law-Making, that evaluation should be based on the criteria of efficiency, effectiveness, relevance, coherence and value added and should provide the basis for impact assessments of options for further action. In addition, the Commission should assess the need to establish additional restoration targets, based on common methods for assessing the condition of ecosystems not covered by Articles 4 and 5 of this Regulation, taking into account the most recent scientific evidence.

(90) Regulation (EU) 2022/869 of the European Parliament and of the Council[41] should be amended accordingly.

(91) Since the objectives of this Regulation, namely to ensure the long-term and sustained recovery of biodiverse and resilient ecosystems, across the European territory of the Member States, through restoration measures to be put in place by the Member States to collectively meet a Union target for the restoration of land areas and sea areas by 2030 and all areas in need of restoration by 2050, cannot be sufficiently achieved by the Member States but can rather, by reason of the scale and effects of the action, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 TEU. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve those objectives,

HAVE ADOPTED THIS REGULATION:

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[41] Regulation (EU) 2022/869 of the European Parliament and of the Council of 30 May 2022 on guidelines for trans-European energy infrastructure, amending Regulations (EC) No 715/2009, (EU) 2019/942 and (EU) 2019/943 and Directives 2009/73/EC and (EU) 2019/944, and repealing Regulation (EU) No 347/2013 (OJ L 152, 3.6.2022, p. 45).

Chapter I
General provisions

Article 1

Subject matter

1. This Regulation lays down rules to contribute to:

   (a) the long-term and sustained recovery of biodiverse and resilient ecosystems across the Member States' land and sea areas through the restoration of degraded ecosystems;

   (b) achieving the Union's overarching objectives concerning climate change mitigation, climate change adaptation and land degradation neutrality;

   (c) enhancing food security;

   (d) meeting the Union's international commitments.

2. This Regulation establishes a framework within which Member States shall put in place effective and area-based restoration measures with the aim to jointly cover, as a Union target, throughout the areas and ecosystems within the scope of this Regulation, at least 20 % of land areas and at least 20 % of sea areas by 2030, and all ecosystems in need of restoration by 2050.

Article 2

Geographical scope

This Regulation applies to ecosystems as referred to in Articles 4 to 12:

(a) in the territory of the Member States;

(b) in the coastal waters, as defined in Article 2, point (7), of Directive 2000/60/EC, of the Member States, their seabed or their subsoil;

(c) in waters, the seabed or subsoil on the seaward side of the baseline from which the extent of the territorial waters of a Member State is measured, extending to the outmost reach of the area where a Member State has or exercises sovereign rights or jurisdiction, in accordance with the 1982 United Nations Convention on the Law of the Sea[42].

This Regulation applies only to ecosystems in the European territory of the Member States to which the Treaties apply.

Article 3

Definitions

For the purposes of this Regulation, the following definitions apply:

(1) 'ecosystem' means a dynamic complex of plant, animal, fungi and microorganism communities and their non-living environment, interacting as a functional unit, and includes habitat types, habitats of species and species populations;

[42] OJ L 179, 23.6.1998, p. 3.

(2) ‘habitat of a species’ means habitat of a species as defined in Article 1, point (f), of Directive 92/43/EEC;

(3) ‘restoration’ means the process of actively or passively assisting the recovery of an ecosystem in order to improve its structure and functions, with the aim of conserving or enhancing biodiversity and ecosystem resilience, through improving an area of a habitat type to good condition, re-establishing favourable reference area, and improving a habitat of a species to sufficient quality and quantity in accordance with Article 4(1), (2) and (3) and Article 5(1), (2) and (3), and meeting the targets and fulfilling the obligations under Articles 8 to 12, including reaching satisfactory levels for the indicators referred to in Articles 8 to 12;

(4) ‘good condition’ means, as regards an area of a habitat type, a state where the key characteristics of the habitat type, in particular its structure, functions and typical species or typical species composition reflect the high level of ecological integrity, stability and resilience necessary to ensure its long-term maintenance and thus contribute to reaching or maintaining favourable conservation status for a habitat, where the habitat type concerned is listed in Annex I to Directive 92/43/EEC, and, in marine ecosystems, contribute to achieving or maintaining good environmental status;

(5) ‘good environmental status’ means good environmental status as defined in Article 3, point (5), of Directive 2008/56/EC;

(6) ‘favourable conservation status for a habitat’ means favourable conservation status within the meaning of Article 1, point (e), of Directive 92/43/EEC;

(7) ‘favourable conservation status for a species’ means favourable conservation status within the meaning of Article 1, point (i), of Directive 92/43/EEC;

(8) ‘favourable reference area’ means the total area of a habitat type in a given biogeographical or marine region at national level that is considered the minimum necessary to ensure the long-term viability of the habitat type and its typical species or typical species composition, and all the significant ecological variations of that habitat type in its natural range, and which is composed of the current area of the habitat type and, if that area is not sufficient for the long-term viability of the habitat type and its typical species or typical species composition, the additional area necessary for the re-establishment of the habitat type; where the habitat type concerned is listed in Annex I to Directive 92/43/EEC, such re-establishment contributes to reaching favourable conservation status for a habitat and, in marine ecosystems, such re-establishment contributes to achieving or maintaining good environmental status;

(9) ‘sufficient quality of habitat’ means the quality of a habitat of a species which allows the ecological requirements of a species to be met at any stage of its biological cycle so that it is maintaining itself on a long-term basis as a viable component of its habitat in its natural range, contributing to reaching or maintaining favourable conservation status for a species listed in Annex II, IV or V to Directive 92/43/EEC and securing populations of wild bird species covered by Directive 2009/147/EC and, in addition, in marine ecosystems, contributing to achieving or maintaining good environmental status;

(10) ‘sufficient quantity of habitat’ means the quantity of a habitat of a species which allows the ecological requirements of a species to be met at any stage of its biological cycle so that it is maintaining itself on a long-term basis as a viable component of its habitat in its natural range, contributing to reaching or maintaining favourable conservation status for a species listed in Annex II, IV or V to Directive 92/43/EEC and securing populations of wild bird species covered by Directive 2009/147/EC and, in addition, in marine ecosystems, contributing to achieving or maintaining good environmental status;

(11) ‘very common and widespread habitat type’ means a habitat type that occurs in several biogeographical regions in the Union with a range exceeding 10 000 km^2;

(12) ‘pollinator’ means a wild insect which transports pollen from the anther of a plant to the stigma of a plant, enabling fertilisation and the production of seeds;

(13) ‘decline of pollinator populations’ means a decrease in abundance or diversity, or both, of pollinators;

(14) ‘native tree species’ means a tree species occurring within its natural range, past or present, and dispersal potential, i.e. within the range it occupies naturally or could occupy without direct or indirect introduction or care by humans;

(15) ‘local administrative unit’ or ‘LAU’ means a low-level administrative division of a Member State, below that of a province, region or state, established in accordance with Article 4 of Regulation (EC) No 1059/2003 of the European Parliament and of the Council[43];

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43 Regulation (EC) No 1059/2003 of the European Parliament and of the Council of 26 May 2003 on the establishment of a common classification of territorial units for statistics (NUTS) (OJ L 154, 21.6.2003, p. 1).

(16) ‘urban centres’ and ‘urban clusters’ means territorial units classified in cities and towns and suburbs using the grid-based typology established in accordance with Article 4b(2) of Regulation (EC) No 1059/2003;

(17) ‘cities’ means LAUs where at least 50 % of the population lives in one or more urban centres, measured using the degree of urbanisation established in accordance with Article 4b(3), point (a), of Regulation (EC) No 1059/2003;

(18) ‘towns and suburbs’ means LAUs where less than 50 % of the population lives in an urban centre, but at least 50 % of the population lives in an urban cluster, measured using the degree of urbanisation established in accordance with Article 4b(3), point (a), of Regulation (EC) No 1059/2003;

(19) ‘peri-urban areas’ means areas adjacent to urban centres or urban clusters, including at least all areas within 1 kilometre measured from the outer limits of those urban centres or urban clusters, and located in the same city or the same town and suburb as those urban centres or urban clusters;

(20) ‘urban green space’ means the total area of trees, bushes, shrubs, permanent herbaceous vegetation, lichens and mosses, ponds and watercourses found within cities or towns and suburbs, calculated on the basis of data provided by the Copernicus Land Monitoring Service under the Copernicus component of the Union Space Programme, established by Regulation (EU) 2021/696, and, if available for the Member State concerned, other appropriate supplementary data provided by that Member State;

(21) ‘urban tree canopy cover’ means the total area of tree cover within cities and towns and suburbs, calculated on the basis of the Tree Cover Density data provided by the Copernicus Land Monitoring Service under the Copernicus component of the Union Space Programme, established by Regulation (EU) 2021/696, and, if available for the Member State concerned, other appropriate supplementary data provided by that Member State;

(22) ‘free-flowing river’ means a river or a stretch of river the longitudinal, lateral and vertical connectivity of which is not hindered by artificial structures forming a barrier and the natural functions of which are largely unaffected;

(23) ‘rewetting peatland’ means the process of changing a drained peat soil towards a wet peat soil;

(24) ‘renewables acceleration area’ means renewables acceleration area as defined in Article 2, point (9a), of Directive (EU) 2018/2001.

Chapter II
Restoration targets and obligations

Article 4

Restoration of terrestrial, coastal and freshwater ecosystems

1. Member States shall put in place the restoration measures that are necessary to improve to good condition areas of habitat types listed in Annex I which are not in good condition. Such restoration measures shall be put in place:

   (a) by 2030 on at least 30 % of the total area of all habitat types listed in Annex I that is not in good condition, as quantified in the national restoration plan referred to in Article 15;

   (b) by 2040 on at least 60 % and by 2050, on at least 90 % of the area of each group of habitat types listed in Annex I that is not in good condition, as quantified in the national restoration plan referred to in Article 15.

   For the purpose of this paragraph, Member States shall, as appropriate, until 2030 give priority to restoration measures in areas that are located in Natura 2000 sites.

2. By way of derogation from paragraph 1, first subparagraph, points (a) and (b), Member States may, where duly justified and for the purposes of that paragraph, exclude from the relevant group of habitat types very common and widespread habitat types that cover more than 3 % of their European territory.

Where a Member State applies the derogation referred to in the first subparagraph, the Member State shall put in place restoration measures:

(a) by 2050 on an area representing at least 80 % of the area that is not in good condition for each of those habitat types;

(b) by 2030 on at least one third of the percentage referred to in point (a); and

(c) by 2040 on at least two thirds of the percentage referred to in point (a).

The derogation referred to in the first subparagraph shall only be applied if it is ensured that the percentage referred to in point (a) of the second subparagraph does not prevent the favourable conservation status for each of those habitat types, from being reached or maintained at national biogeographical level.

3. If a Member State applies the derogation pursuant to paragraph 2, the obligation set out in paragraph 1, first subparagraph, point (a), shall apply to the total area of all remaining habitat types listed in Annex I that is not in good condition and the obligation set out in paragraph 1, first subparagraph, point (b), shall apply to the remaining areas of the relevant groups of habitat types listed in Annex I that are not in good condition.

4. Member States shall put in place the restoration measures that are necessary to re-establish the habitat types listed in Annex I in areas where those habitat types do not occur, with the aim of reaching the favourable reference area for those habitat types. Such measures shall be in place on areas representing at least 30 % of the additional surface needed to reach the total favourable reference area for each group of habitat types listed in Annex I, as quantified in the national restoration plan referred to in Article 15, by 2030, on areas representing at least 60 % of that surface by 2040, and on 100 % of that surface by 2050.

5. By way of derogation from paragraph 4 of this Article, if a Member State considers that it is not possible to put in place restoration measures by 2050 that are necessary to reach the favourable reference area for a specific habitat type on 100 % of the surface, the Member State concerned may set a lower percentage at a level between 90 % and 100 % in its national restoration plan as referred to in Article 15 and provide adequate justification. In such a case, the Member State shall gradually put in place restoration measures that are necessary to achieve that lower percentage by 2050. By 2030, those restoration measures shall cover at least 30 % of the additional surface needed to achieve such lower percentage by 2050, and by 2040, they shall cover at least 60 % of the additional surface needed to achieve such lower percentage by 2050.

6. If a Member State applies the derogation pursuant to paragraph 5 to specific habitat types, the obligation set out in paragraph 4 shall apply to the remaining habitat types that are part of the groups of habitat types listed in Annex I to which those specific habitat types belong.

7. Member States shall put in place restoration measures for the terrestrial, coastal and freshwater habitats of the species listed in Annexes II, IV and V to Directive 92/43/EEC and of the terrestrial, coastal and freshwater habitats of wild birds falling within the scope of Directive 2009/147/EC that are, in addition to the restoration measures referred to in paragraphs 1 and 4 of this Article, necessary to improve the quality and quantity of those habitats, including by re-establishing them, and to enhance connectivity, until sufficient quality and quantity of those habitats is achieved.

8. The determination of the most suitable areas for restoration measures in accordance with paragraphs 1, 4 and 7 of this Article shall be based on the best available knowledge and the latest scientific evidence of the condition of the habitat types listed in Annex I to this Regulation, measured by the structure and functions which are necessary for their long-term maintenance, including their typical species, as referred to in Article 1, point (e), of Directive 92/43/EEC, and of the quality and quantity of the habitats of the species referred to in paragraph 7 of this Article, making use of information reported under Article 17 of Directive 92/43/EEC and Article 12 of Directive 2009/147/EC, and where appropriate taking into account the diversity of situations in various regions as referred to in Article 14(16), point (c), of this Regulation.

9. Member States shall ensure, by 2030 at the latest, that the condition of habitat types is known for at least 90 % of the area distributed over all habitat types listed in Annex I and that by 2040, the condition of all areas of habitat types listed in Annex I is known.

10. The restoration measures referred to in paragraphs 1 and 4 shall consider the need for improved connectivity between the habitat types listed in Annex I and take into account the ecological requirements of the species referred to in paragraph 7 that occur in those habitat types.

11. Member States shall put in place measures which shall aim to ensure that the areas that are subject to restoration measures in accordance with paragraphs 1, 4 and 7 show a continuous improvement in the condition of the habitat types listed in Annex I until good condition is reached, and a continuous improvement of the quality of the habitats of the species referred to in paragraph 7, until the sufficient quality of those habitats is reached.

Without prejudice to Directive 92/43/EEC, Member States shall put in place measures which shall aim to ensure that areas in which good condition has been reached, and in which the sufficient quality of the habitats of the species has been reached, do not significantly deteriorate.

12. Without prejudice to Directive 92/43/EEC, Member States shall, by the date of publication of their national restoration plans in accordance with Article 17(6) of this Regulation, endeavour to put in place necessary measures with the aim of preventing significant deterioration of areas where the habitat types listed in Annex I to this Regulation occur and which are in good condition or are necessary to meet the restoration targets set out in paragraph 17 of this Article.

13. With regard to paragraphs 11 and 12 of this Article, outside Natura 2000 sites, Member States may, in the absence of alternatives, apply the non-deterioration requirements set out in those paragraphs at the level of each biogeographical region of their territory for each habitat type and each habitat of species, provided that the Member State concerned notifies its intention to apply this paragraph to the Commission by … [six months from the date of entry into force of this Regulation] and fulfils the obligations set out in Article 15(3), point (g), Article 20(1) point (j), Article 21(1) and Article 21(2), point (b).

14. Outside Natura 2000 sites, the obligation set out in paragraph 11 shall not apply to deterioration caused by:

(a) *force majeure*, including natural disasters;

(b) unavoidable habitat transformations which are directly caused by climate change;

(c) a plan or project of overriding public interest for which no less damaging alternative solutions are available, to be determined on a case by case basis; or

(d) action or inaction by third countries for which the Member State concerned is not responsible.

15. Outside Natura 2000 sites, the obligation set out in paragraph 12 shall not apply to deterioration caused by:

(a) *force majeure*, including natural disasters;

(b) unavoidable habitat transformations which are directly caused by climate change;

(c) a plan or project of overriding public interest for which no less damaging alternative solutions are available; or

(d) action or inaction by third countries for which the Member State concerned is not responsible.

16. Within Natura 2000 sites, the non-fulfilment of the obligations set out in paragraphs 11 and 12 is justified if it is caused by:

(a) *force majeure*, including natural disasters;

(b) unavoidable habitat transformations which are directly caused by climate change; or

(c) a plan or project authorised in accordance with Article 6(4) of Directive 92/43/EEC.

17. Member States shall ensure that there is:

(a) an increase of the area in good condition for habitat types listed in Annex I until at least 90 % is in good condition and until the favourable reference area for each habitat type in each biogeographic region of the Member State concerned is reached;

(b) an increasing trend towards the sufficient quality and quantity of the terrestrial, coastal and freshwater habitats of the species listed in Annexes II, IV and V to Directive 92/43/EEC and of the species falling within the scope of Directive 2009/147/EC.

Article 5

Restoration of marine ecosystems

1. Member States shall put in place the restoration measures that are necessary to improve to good condition areas of habitat types listed in Annex II which are not in good condition. Such restoration measures shall be put in place:

(a) by 2030, on at least 30 % of the total area of groups 1 to 6 of the habitat types listed in Annex II that is not in good condition, as quantified in the national restoration plan referred to in Article 15;

(b) by 2040, on at least 60 % and, by 2050, on at least 90 % of the area of each of the groups 1 to 6 of the habitat types listed in Annex II that is not in good condition, as quantified in the national restoration plan referred to in Article 15;

(c) by 2040, on at least two thirds of the percentage referred to in point (d) of this paragraph of the area of group 7 of the habitat types listed in Annex II that is not in good condition, as quantified in the national restoration plan referred to in Article 15; and

(d) by 2050, on a percentage, identified in accordance with Article 14(3), of the area of group 7 of the habitat types listed in Annex II that is not in good condition, as quantified in the national restoration plan referred to in Article 15.

The percentage referred to in the first subparagraph, point (d), of this Article shall be set so as not to prevent good environmental status, as determined pursuant to Article 9(1) of Directive 2008/56/EC, from being achieved or maintained.

2. Member States shall put in place the restoration measures that are necessary to re-establish the habitat types in groups 1 to 6 listed in Annex II in areas where those habitat types do not occur, with the aim of reaching the favourable reference area for those habitat types. Such measures shall be in place on areas representing at least 30 % of the additional surface needed to reach the favourable reference area for each group of habitat types, as quantified in the national restoration plan referred to in Article 15, by 2030, on areas representing at least 60 % of that surface by 2040, and on 100 % of that surface by 2050.

3. By way of derogation from paragraph 2 of this Article, if a Member State considers that it is not possible to put in place restoration measures by 2050 that are necessary to reach the favourable reference area for a specific habitat type on 100 % of the surface, the Member State concerned may set a lower percentage at a level between 90 % and 100 % in its national restoration plan as referred to in Article 15 and provide adequate justification. In such a case, the Member State shall gradually put in place restoration measures that are necessary to achieve that lower percentage by 2050. By 2030, those restoration measures shall cover at least 30 % of the additional surface needed to achieve such lower percentage by 2050, and by 2040, they shall cover at least 60 % of the additional surface needed to achieve such lower percentage by 2050.

4. If a Member State applies the derogation pursuant to paragraph 3 to specific habitat types, the obligation set out in paragraph 2 shall apply to the remaining additional surface needed to reach the favourable reference area of each group of habitat types listed in Annex II to which those specific habitat types belong.

5. Member States shall put in place restoration measures for the marine habitats of species listed in Annex III to this Regulation and in Annexes II, IV and V to Directive 92/43/EEC and for the marine habitats of wild birds falling within the scope of Directive 2009/147/EC that are, in addition to the restoration measures referred to in paragraphs 1 and 2 of this Article, necessary to improve the quality and quantity of those habitats, including by re-establishing them, and to enhance connectivity, until sufficient quality and quantity of those habitats is achieved.

6. The determination of the most suitable areas for restoration measures in accordance with paragraphs 1, 2 and 5 of this Article shall be based on the best available knowledge and the latest technical and scientific progress in determining the condition of the habitat types listed in Annex II to this Regulation and the quality and quantity of the habitats of the species referred to in paragraph 5 of this Article, making use of information reported under Article 17 of Directive 92/43/EEC, Article 12 of Directive 2009/147/EC and Article 17 of Directive 2008/56/EC.

7. Member States shall ensure that the condition is known of the following areas:

(a) by 2030, for at least 50 % of the area distributed over all habitat types in groups 1 to 6 listed in Annex II;

(b) by 2040, for all areas of the habitat types in groups 1 to 6 listed in Annex II;

(c) by 2040, for at least 50 % of the area distributed over all habitat types in group 7 listed in Annex II;

(d) by 2050, for all areas of the habitat types in group 7 listed in Annex II.

8. The restoration measures referred to in paragraphs 1 and 2 shall consider the need for improved ecological coherence and connectivity between the habitat types listed in Annex II and take into account the ecological requirements of the species referred to in paragraph 5 that occur in those habitat types.

9. Member States shall put in place measures which shall aim to ensure that the areas that are subject to restoration measures in accordance with paragraphs 1, 2 and 5 show a continuous improvement in the condition of the habitat types listed in Annex II until good condition is reached, and a continuous improvement of the quality of the habitats of the species referred to in paragraph 5, until the sufficient quality of those habitats is reached.

Without prejudice to Directive 92/43/EEC, Member States shall put in place measures which shall aim to ensure that areas in which good condition has been reached, and in which the sufficient quality of the habitats of the species has been reached, do not significantly deteriorate.

10. Without prejudice to Directive 92/43/EEC, Member States shall, by the date of publication of their national restoration plans in accordance with Article 17(6) of this Regulation, endeavour to put in place necessary measures with the aim of preventing significant deterioration of areas where the habitat types listed in Annex II to this Regulation occur and which are in good condition or are necessary to meet the restoration targets set out in paragraph 14 of this Article.

11. Outside Natura 2000 sites, the obligation set out in paragraph 9 shall not apply to deterioration caused by:

(a) *force majeure*, including natural disasters;

(b) unavoidable habitat transformations which are directly caused by climate change;

(c) a plan or project of overriding public interest for which no less damaging alternative solutions are available, to be determined on a case by case basis; or

(d) action or inaction by third countries for which the Member State concerned is not responsible.

12. Outside Natura 2000 sites, the obligation set out in paragraph 10 shall not apply to deterioration caused by:

(a) *force majeure*, including natural disasters;

(b) unavoidable habitat transformations which are directly caused by climate change;

(c) a plan or project of overriding public interest, for which no less damaging alternative solutions are available; or

(d) action or inaction by third countries for which the Member State concerned is not responsible.

13. Within Natura 2000 sites, the non-fulfilment of the obligations set out in paragraphs 9 and 10 is justified if it is caused by:

(a) *force majeure*, including natural disasters;

(b) unavoidable habitat transformations which are directly caused by climate change; or

(c) a plan or project authorised in accordance with Article 6(4) of Directive 92/43/EEC.

14. Member States shall ensure that there is:

(a) an increase of the area in good condition for habitat types of groups 1 to 6 of the habitat types listed in Annex II until at least 90 % is in good condition and until the favourable reference area for each habitat type in each biogeographic region of the Member State concerned is reached;

(b) an increase of the area in good condition for habitat types of group 7 of the habitat types listed in Annex II until at least the percentage, referred to in paragraph 1, first subparagraph, point (d), is in good condition and until the favourable reference area for each habitat type in each biogeographical region of the Member State concerned is reached;

(c) an increasing trend towards the sufficient quality and quantity of the marine habitats of the species listed in Annex III to this Regulation and in Annexes II, IV and V to Directive 92/43/EEC and of the species falling within the scope of Directive 2009/147/EC.

Article 6

Energy from renewable sources

1. For the purposes of Article 4(14) and (15) and Article 5(11) and (12), the planning, construction and operation of plants for the production of energy from renewable sources, their connection to the grid and the related grid itself, and storage assets shall be presumed to be in the overriding public interest. Member States may exempt them from the requirement that no less damaging alternative solutions are available under Article 4(14) and (15) and Article 5(11) and (12), provided that:

   (a) a strategic environmental assessment has been carried out in accordance with the conditions set out in Directive 2001/42/EC of the European Parliament and of the Council[44]; or

   (b) they have been subject to an environmental impact assessment in accordance with the conditions set out in Directive 2011/92/EU of the European Parliament and of the Council[45].

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[44] Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment (OJ L 197, 21.7.2001, p. 30).

[45] Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (OJ L 26, 28.1.2012, p. 1).

2. Member States may restrict in duly justified and specific circumstances the application of paragraph 1 to certain parts of their territory as well as to certain types of technologies or to projects with certain technical characteristics in accordance with the priorities set in their integrated national energy and climate plans pursuant to Regulation (EU) 2018/1999.

If Member States apply restrictions pursuant to the first subparagraph, they shall inform the Commission about those restrictions and justify them.

Article 7

National defence

1. When putting in place restoration measures for the purposes of Article 4(1), (4) or (7) or Article 5(1), (2) or (5), Member States may exempt areas used for activities the sole purpose of which is national defence if those measures are deemed to be incompatible with the continued military use of the areas in question.

2. For the purposes of Article 4(14) and (15) and Article 5(11) and (12), Member States may provide that plans and projects the sole purpose of which is national defence are presumed to be in the overriding public interest.

For the purposes of Article 4(14) and (15) and Article 5(11) and (12), Member States may exempt plans and projects the sole purpose of which is national defence from the requirement that no less damaging alternative solutions are available. However, where a Member State applies that exemption, the Member State shall put in place measures, as far as reasonable and practicable, with the aim to mitigate the impact of those plans and projects on habitat types.

Article 8

Restoration of urban ecosystems

1. By 31 December 2030, Member States shall ensure that there is no net loss in the total national area of urban green space and of urban tree canopy cover in urban ecosystem areas, determined in accordance with Article 14(4), compared to … [year of entry into force of this Regulation]. For the purposes of this paragraph, Member States may exclude from those total national areas the urban ecosystem areas in which the share of urban green space in the urban centres and urban clusters exceeds 45 % and the share of urban tree canopy cover exceeds 10 %.

2. From 1 January 2031, Member States shall achieve an increasing trend in the total national area of urban green space, including through the integration of urban green space into buildings and infrastructure, in urban ecosystem areas, determined in accordance with Article 14(4), measured every six years from 1 January 2031, until a satisfactory level as set in accordance with Article 14(5) is reached.

3. Member States shall achieve, in each urban ecosystem area, determined in accordance with Article 14(4), an increasing trend of urban tree canopy cover, measured every six years from 1 January 2031, until the satisfactory level identified as set in accordance with Article 14(5) is reached.

Article 9

Restoration of the natural connectivity of rivers and natural functions of the related floodplains

1. Member States shall make an inventory of artificial barriers to the connectivity of surface waters and, taking into account the socio-economic functions of the artificial barriers, identify the barriers that need to be removed to contribute to meeting the restoration targets set out in Article 4 of this Regulation and fulfilling the objective of restoring at least 25 000 km of rivers into free-flowing rivers in the Union by 2030, without prejudice to Directive 2000/60/EC, in particular Article 4(3), (5) and (7) thereof, and Regulation (EU) No 1315/2013 of the European Parliament and of the Council[46], in particular Article 15 thereof.

2. Member States shall remove the artificial barriers to the connectivity of surface waters identified in the inventory made pursuant to paragraph 1 of this Article, in accordance with the plan for their removal referred to in Article 15(3), points (i) and (n). When removing artificial barriers, Member States shall primarily address obsolete barriers, namely those that are no longer needed for renewable energy generation, inland navigation, water supply, flood protection or other uses.

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[46] Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU (OJ L 348, 20.12.2013, p. 1).

3. Member States shall complement the removal of artificial barriers in accordance with paragraph 2 by the measures necessary to improve the natural functions of the related floodplains.

4. Member States shall ensure that the natural connectivity of rivers and natural functions of the related floodplains restored in accordance with paragraphs 2 and 3 are maintained.

Article 10

Restoration of pollinator populations

1. Member States shall, by putting in place in a timely manner appropriate and effective measures, improve pollinator diversity and reverse the decline of pollinator populations at the latest by 2030 and thereafter achieve an increasing trend of pollinator populations, measured at least every six years from 2030, until satisfactory levels are achieved, as set in accordance with Article 14(5).

2. The Commission is empowered to adopt delegated acts in accordance with Article 23 to supplement this Regulation by establishing and updating a science-based method for monitoring pollinator diversity and pollinator populations. The Commission shall adopt the first of those delegated acts establishing such method by ... [12 months from the date of entry into force of this Regulation].

3. The method referred to in paragraph 2 shall provide a standardised approach for collecting annual data on the abundance and diversity of pollinator species across ecosystems, for assessing pollinator population trends and the effectiveness of restoration measures adopted by Member States in accordance with paragraph 1.

4. When using the method referred to in paragraph 2, Member States shall ensure that monitoring data comes from an adequate number of sites to ensure representativeness across their territories. Member States shall promote citizen science in the collection of monitoring data where suitable and provide adequate resources for the performance of those tasks.

5. The Commission and the relevant Union agencies, in particular the EEA, the European Food Safety Authority and the European Chemicals Agency, shall, in accordance with their respective mandates, coordinate their activities concerning pollinators and provide information to support Member States, upon their request, in the fulfilment of their obligations under this Article. To that end the Commission shall, inter alia, set up a dedicated task force and disseminate relevant information and expertise to Member States in a coordinated manner.

Article 11

Restoration of agricultural ecosystems

1. Member States shall put in place the restoration measures necessary to enhance biodiversity in agricultural ecosystems, in addition to the areas that are subject to restoration measures under Article 4(1), (4) and (7), taking into account climate change, the social and economic needs of rural areas and the need to ensure sustainable agricultural production in the Union.

2. Member States shall put in place measures which shall aim to achieve an increasing trend at national level of at least two out of the three following indicators for agricultural ecosystems, as further specified in Annex IV, measured in the period from ... [the date of entry into force of this Regulation] until 31 December 2030, and every six years thereafter, until the satisfactory levels as set in accordance with Article 14(5) are reached:

   (a) grassland butterfly index;

   (b) stock of organic carbon in cropland mineral soils;

   (c) share of agricultural land with high-diversity landscape features.

3. Member States shall put in place restoration measures which shall aim to ensure that the common farmland bird index at national level based on the species specified in Annex V, indexed on … [date: the first day of the month following 12 months from the date of entry into force of this Regulation] = 100, reaches the following levels:

(a) for Member States listed in Annex V with historically more depleted populations of farmland birds: 110 by 2030, 120 by 2040 and 130 by 2050;

(b) for Member States listed in Annex V with historically less depleted populations of farmland birds: 105 by 2030, 110 by 2040 and 115 by 2050.

4. Member States shall put in place measures which shall aim to restore organic soils in agricultural use constituting drained peatlands. Those measures shall be in place on at least:

(a) 30 % of such areas by 2030, of which at least a quarter shall be rewetted;

(b) 40 % of such areas by 2040, of which at least a third shall be rewetted;

(c) 50 % of such areas by 2050, of which at least a third shall be rewetted.

Member States may put in place restoration measures, including rewetting, in areas of peat extraction sites and count those areas as contributing to meeting the respective targets referred to in the first subparagraph, points (a), (b) and (c).

In addition, Member States may put in place restoration measures to rewet organic soils that constitute drained peatlands under land uses other than agricultural use and peat extraction and count those rewetted areas as contributing, up to a maximum of 40 %, to meeting the targets referred to in the first subparagraph, points (a), (b) and (c).

Restoration measures that consist in rewetting peatland, including the water levels to be achieved, shall contribute to reducing greenhouse gas net emissions and increasing biodiversity, while taking national and local circumstances into account.

Where duly justified, the extent of the rewetting of peatland under agricultural use may be reduced to less than required under the first subparagraph, points (a), (b) and (c), of this paragraph by a Member State if such rewetting is likely to have significant negative impacts on infrastructure, buildings, climate adaptation or other public interests and if such rewetting cannot take place on land other than agricultural land. Any such reduction shall be determined in accordance with Article 14(8).

The obligation for Member States to meet the rewetting targets set out in the first subparagraph, points (a), (b) and (c), does not imply an obligation for farmers and private landowners to rewet their land, for whom rewetting on agricultural land remains voluntary, without prejudice to obligations stemming from national law.

Member States shall, as appropriate, incentivise rewetting to make it an attractive option for farmers and private landowners and foster access to training and advice to farmers and other stakeholders on the benefits of rewetting peatland and on the options of subsequent land management and related opportunities.

Article 12

Restoration of forest ecosystems

1. Member States shall put in place the restoration measures necessary to enhance biodiversity of forest ecosystems, in addition to the areas that are subject to restoration measures pursuant to Article 4(1), (4) and (7), while taking into account the risks of forest fires.

2. Member States shall achieve an increasing trend at national level of the common forest bird index, as further specified in Annex VI, measured in the period from … [the date of entry into force of this Regulation] until 31 December 2030, and every six years thereafter, until the satisfactory levels as set in accordance with Article 14(5) are reached.

3. Member States shall achieve an increasing trend at national level of at least six out of seven of the following indicators for forest ecosystems, as further specified in Annex VI, chosen on the basis of their ability to demonstrate the enhancement of biodiversity of forest ecosystems within the Member State concerned. The trend shall be measured in the period from ... [the date of entry into force of this Regulation] until 31 December 2030, and every six years thereafter, until the satisfactory levels as set in accordance with Article 14(5) are reached:

   (a) standing deadwood;

   (b) lying deadwood;

   (c) share of forests with uneven-aged structure;

(d) forest connectivity;

(e) stock of organic carbon;

(f) share of forests dominated by native tree species;

(g) tree species diversity.

4. The non-fulfilment of the obligations set out in paragraphs 2 and 3 is justified if caused by:

(a) large-scale *force majeure*, including natural disasters, in particular unplanned and uncontrolled wildfire; or

(b) unavoidable habitat transformations which are directly caused by climate change.

Article 13

Planting three billion additional trees

1. When identifying and implementing the restoration measures to fulfil the objectives and obligations set out in Articles 4 and 8 to 12, Member States shall aim to contribute to the commitment of planting at least three billion additional trees by 2030 at Union level.

2. Member States shall ensure that their contribution to fulfilling the commitment set out in paragraph 1 is achieved in full respect of ecological principles, including by ensuring species diversity and age-structure diversity, prioritising native tree species except for, in very specific cases and conditions, non-native species adapted to the local soil, climatic and ecological context and habitat conditions that play a role in fostering increased resilience to climate change. The measures to achieve that commitment shall aim to increase ecological connectivity and be based on sustainable afforestation, reforestation and tree planting and the increase of urban green space.

Chapter III
National restoration plans

Article 14
Preparation of the national restoration plans

1. Member States shall each prepare a national restoration plan and carry out the preparatory monitoring and research needed to identify the restoration measures that are necessary to meet the restoration targets and fulfil the obligations set out in Articles 4 to 13 and to contribute to the Union's overarching objectives and targets set out in Article 1, taking into account the latest scientific evidence.

2. Member States shall quantify the area that needs to be restored to meet the restoration targets set out in Articles 4 and 5, taking into account the condition of the habitat types referred to in Article 4(1) and (4) and Article 5(1) and (2) and the quality and quantity of the habitats of the species referred to in Article 4(7) and Article 5(5) that are present in the ecosystems covered by Article 2. The quantification shall be based, inter alia, on the following information:

(a) for each habitat type:

(i) the total habitat area and a map of its current distribution;

(ii) the habitat area that is not in good condition;

(iii) the favourable reference area, taking into account records of historical distribution and the projected changes to environmental conditions due to climate change;

(iv) the areas most suitable for the re-establishment of habitat types in view of ongoing and projected changes to environmental conditions due to climate change;

(b) the sufficient quality and quantity of the habitats of the species required for reaching their favourable conservation status, taking into account the areas most suitable for re-establishment of those habitats, and the connectivity needed between them in order for the species populations to thrive, as well as ongoing and projected changes to environmental conditions due to climate change, the competing needs of the habitats and species, and the presence of high nature value farmland.

For the purpose of quantifying the area of each habitat type that needs to be restored to meet the restoration targets set out in Article 4(1), point (a), and Article 5(1), point (a), the habitat area that is not in good condition referred to in the first subparagraph, point (a)(ii), of this paragraph shall only include those areas for which the condition of the habitat type is known.

For the purpose of quantifying the area of each habitat type that needs to be restored to meet the restoration targets set out in Article 4(1), point (b), and Article 5(1), points (b), (c) and (d), the habitat area that is not in good condition referred to in the first subparagraph, point (a)(ii), of this paragraph shall only include those areas for which the condition of the habitat type is known or is to be known pursuant to Article 4(9) and Article 5(7).

If a Member State intends to apply the derogation laid down in Article 4(2), that Member State shall identify the percentages referred to in that Article.

If a Member State intends to apply the derogation laid down in Article 4(5) and Article 5(3), that Member State shall identify the lower percentages chosen pursuant to those Articles.

3. With regard to group 7 of the habitat types listed in Annex II, Member States shall set the percentage referred to in Article 5(1), point (d).

4. Member States shall determine and map urban ecosystem areas as referred to in Article 8 for all their cities and towns and suburbs.

The urban ecosystem area of a city or of a town and suburb shall include:

(a) the entire city or town and suburb; or

(b) parts of the city or of the town and suburb, including at least its urban centres, urban clusters and, if deemed appropriate by the Member State concerned, peri-urban areas.

Member States may aggregate the urban ecosystem areas of two or more adjacent cities, or two or more adjacent towns and suburbs, or both, into one urban ecosystem area common to those cities, or towns and suburbs, respectively.

5. By 2030, Member States shall set, through an open and effective process and assessment based on the latest scientific evidence, the guiding framework referred to in Article 20(10) and, if available, the guiding framework referred to in Article 20(11) satisfactory levels for:

(a) pollinator populations referred to in Article 10(1) and for the indicator referred to in Article 12(2);

(b) each of the chosen indicators referred to in Article 11(2);

(c) each of the chosen indicators referred to in Article 12(3);

(d) urban green space referred to in Article 8(2); and

(e) urban tree canopy cover referred to in Article 8(3).

6. Member States shall identify and map the agricultural and forest areas in need of restoration, in particular the areas that, due to intensification or other management factors, are in need of enhanced connectivity and landscape diversity.

7. Each Member State may, by ... [one year from the date of entry into force of this Regulation], develop a methodology to complement the methodology referred to in Annex IV, in order to monitor high-diversity landscape features not covered by the common method referred to in the description of high-diversity landscape features in that Annex. The Commission shall provide guidance on the framework for developing such methodologies by ... [one month from the date of entry into force of this Regulation].

8. Member States shall, where applicable, determine the reduction of the extent of the rewetting of peatland under agricultural use, as referred to in Article 11(4), fifth subparagraph.

9. Member States shall identify synergies with climate change mitigation, climate change adaptation, land degradation neutrality and disaster prevention and prioritise restoration measures accordingly. Member States shall also take into account:

(a) their integrated national energy and climate plans referred to in Article 3 of Regulation (EU) 2018/1999;

(b) their long-term strategy referred to in Article 15 of Regulation (EU) 2018/1999;

(c) the binding overall Union target for 2030 set out in Article 3 of Directive (EU) 2018/2001.

10. Member States shall identify synergies with agriculture and forestry. They shall also identify existing agricultural and forestry practices, including CAP interventions, that contribute to the objectives of this Regulation.

11. The implementation of this Regulation shall not imply an obligation for Member States to reprogramme any funding under the CAP, the CFP or other agricultural and fisheries funding programmes and instruments under the MFF 2021-2027.

12. Member States may promote the deployment of private or public support schemes to the benefit of stakeholders implementing restoration measures referred to in Articles 4 to 12 including land managers and owners, farmers, foresters and fishers.

13. Member States shall coordinate the development of national restoration plans with the mapping of areas that are required in order to fulfil at least their national contributions towards the 2030 renewable energy target and, where relevant, with the designation of the renewables acceleration areas and dedicated infrastructure areas. During the preparation of the national restoration plans, Member States shall ensure synergies with the build-up of renewable energy and energy infrastructure and any renewables acceleration areas and dedicated infrastructure areas that are already designated and shall ensure that the functioning of those areas, including the permit-granting procedures applicable in those areas provided for by Directive (EU) 2018/2001, as well as the functioning of grid projects that are necessary to integrate renewable energy into the electricity system and the respective permit-granting process, remain unchanged.

14. When preparing their national restoration plans, Member States shall take into account in particular the following:

(a) the conservation measures established for Natura 2000 sites in accordance with Directive 92/43/EEC;

(b) prioritised action frameworks prepared in accordance with Directive 92/43/EEC;

(c) measures for achieving good quantitative, ecological and chemical status of water bodies included in the programmes of measures and river basin management plans prepared in accordance with Directive 2000/60/EC and flood risk management plans established in accordance with Directive 2007/60/EC of the European Parliament and of the Council[47];

[47] Directive 2007/60/EC of the European Parliament and of the Council of 23 October 2007 on the assessment and management of flood risks (OJ L 288, 6.11.2007, p. 27).

(d) where applicable, marine strategies for achieving good environmental status for all Union marine regions prepared in accordance with Directive 2008/56/EC;

(e) national air pollution control programmes prepared under Directive (EU) 2016/2284;

(f) national biodiversity strategies and action plans developed in accordance with Article 6 of the Convention on Biological Diversity;

(g) where applicable, conservation and management measures adopted under the CFP;

(h) CAP strategic plans drawn up in accordance with Regulation (EU) 2021/2115;

15. When preparing their national restoration plans Member States shall also take into account strategic critical raw material projects where recognised under Union law.

16. When preparing their national restoration plans, Member States:

(a) may make use of the different examples of restoration measures listed in Annex VII, depending on specific national and local conditions, and the latest scientific evidence;

(b) shall aim to optimise the ecological, economic and social functions of ecosystems as well as their contribution to the sustainable development of the relevant regions and communities;

(c) may take into account the diversity of situations in various regions related to social, economic and cultural requirements, regional and local characteristics and population density; where appropriate, the specific situation of the Union's outermost regions, such as their remoteness, insularity, small size, difficult topography and climate, as well as their rich biodiversity and the associated costs for protecting and restoring their ecosystems, should be taken into account.

17. Member States shall, where possible, foster synergies with the national restoration plans of other Member States, in particular for ecosystems that span across borders or where Members States share a marine region or subregion within the meaning of Directive 2008/56/EC.

18. Member States may, where practical and appropriate, for the purpose of preparing and implementing national restoration plans, in relation to the restoration and re-establishment of marine ecosystems, use existing regional institutional cooperation structures.

19. Where Member States identify an issue which is likely to prevent the fulfilment of the obligations to restore and re-establish marine ecosystems, and which requires measures for which they are not competent, they shall, individually or jointly, address, where concerned, Member States, the Commission or international organisations, providing them with a description of the identified issue and of possible measures, with a view to their consideration and potential adoption.

20. Member States shall ensure that the preparation of the restoration plan is open, transparent, inclusive and effective and that the public, including all relevant stakeholders, is given early and effective opportunities to participate in its preparation. Consultations shall comply with the requirements set out in Directive 2001/42/EC.

Article 15

Content of the national restoration plan

1. The national restoration plan shall cover the period up to 2050, with intermediate deadlines corresponding to the targets and obligations set out in Articles 4 to 13.

2. By way of derogation from paragraph 1 of this Article, the national restoration plan to be submitted in accordance with Article 16 and Article 17(6) may, with regard to the period from 1 July 2032, and until reviewed in accordance with Article 19(1), be limited to a strategic overview of the following:

   (a) the elements referred to in paragraph 3; and

   (b) the contents referred to in paragraphs 4 and 5.

   The revised national restoration plan resulting from the review to be carried out by 30 June 2032 in accordance with Article 19(1) may, with regard to the period from 1 July 2042, and until revised by 30 June 2042 in accordance with Article 19(1), be limited to a strategic overview of the elements and contents referred to in first subparagraph of this paragraph.

3. Each Member State shall include the following elements in the national restoration plan, using the uniform format established in accordance with paragraph 7 of this Article:

(a) the quantification of the areas to be restored to meet the restoration targets set out in Articles 4 to 12 based on the preparatory work undertaken in accordance with Article 14 and indicative maps of potential areas to be restored;

(b) if a Member State applies the derogation laid down in Article 4(5) or Article 5(3), a justification of the reasons why it is not possible to put in place restoration measures by 2050 that are necessary to reach the favourable reference area of a specific habitat type and a justification of the lower percentage set pursuant to those Articles, as identified by that Member State;

(c) a description of the restoration measures planned, or put in place, to meet the restoration targets and fulfil the obligations set out in Articles 4 to 13 of this Regulation and a specification regarding which of those restoration measures are planned, or put in place, within the Natura 2000 network established in accordance with Directive 92/43/EEC;

(d) a dedicated section setting out the measures for achieving the obligations laid down in Article 4(9) and Article 5(7);

(e) if a Member State applies the derogation laid down in Article 4(2) of this Regulation, a justification of how the percentages set in accordance with that Article do not prevent the favourable conservation status for the relevant habitat types, as determined pursuant to Article 1, point (e), of Directive 92/43/EEC, from being reached or maintained at national biogeographical level;

(f) an indication of the measures aiming to ensure that the areas covered by the habitat types listed in Annexes I and II do not deteriorate in the areas in which good condition has been reached and that the habitats of the species referred to in Article 4(7) and Article 5(5) do not significantly deteriorate in the areas in which the sufficient quality of the habitats of the species has been reached, in accordance with Article 4(11) and Article 5(9);

(g) where applicable, a description of how Article 4(13) is applied in its territory, including:

(i) an explanation of the system of compensatory measures to be taken for each significant deterioration occurrence, as well as of the necessary monitoring of and reporting on the significant deterioration of habitat types and habitats of the species and the compensatory measures taken;

(ii) an explanation of how it will be ensured that the implementation of Article 4(13) does not affect meeting the targets and fulfilling the objectives set out in Articles 1, 4 and 5;

(h) an indication of the measures with an aim to maintain habitat types listed in Annexes I and II in good condition in areas where they occur and with an aim to prevent significant deterioration of other areas covered by habitat types listed in Annexes I and II, in accordance with Article 4(12) and Article 5(10);

(i) the inventory of barriers and the barriers identified for removal in accordance with Article 9(1), the plan for their removal in accordance with Article 9(2) and the length of free-flowing rivers to be achieved by the removal of those barriers estimated from 2020 to 2030 and by 2050, and any other measures to re-establish the natural functions of floodplains in accordance with Article 9(3);

(j) an account of the indicators for agricultural ecosystems chosen in accordance with Article 11(2), and their suitability to demonstrate the enhancement of biodiversity in agricultural ecosystems within the Member State concerned;

(k) a justification, where applicable, for rewetting peatland on a lower proportion than as set out in Article 11(4), first subparagraph, points (a), (b) and (c);

(l) an account of the indicators for forest ecosystems chosen in accordance with Article 12(3), and their suitability to demonstrate the enhancement of biodiversity in forest ecosystems within the Member State concerned;

(m) a description of the contribution to the commitment referred to in Article 13;

(n) the timing for putting in place the restoration measures in accordance with Articles 4 to 12;

(o) a dedicated section setting out tailored restoration measures in their outermost regions, as applicable;

(p) the monitoring of the areas subject to restoration in accordance with Articles 4 and 5, the process for assessing the effectiveness of the restoration measures put in place in accordance with Articles 4 to 12 and for revising those measures where needed to ensure that the targets and obligations set out in Articles 4 to 13 are met and fulfilled, respectively;

(q) an indication of the provisions for ensuring the continuous, long-term and sustained effects of the restoration measures referred to in Articles 4 to 12;

(r) the estimated co-benefits for climate change mitigation and land degradation neutrality associated with the restoration measures over time;

(s) the foreseeable socio-economic impacts and estimated benefits of the implementation of the restoration measures referred to in Articles 4 to 12;

(t) a dedicated section setting out how the national restoration plan considers:

(i) the relevance of climate change scenarios for the planning of the type and location of restoration measures;

(ii) the potential of restoration measures to minimise climate change impacts on nature, to prevent or mitigate the effects of natural disasters and to support adaptation;

(iii) synergies with national adaptation strategies or plans and national disaster risk assessment reports;

(iv) an overview of the interplay between the measures included in the national restoration plan and the national energy and climate plan;

(u) the estimated financing needs for the implementation of the restoration measures, which shall include a description of the support to stakeholders affected by restoration measures or other new obligations arising from this Regulation, and the means of intended financing, public or private, including financing or co-financing with Union funding instruments;

(v) an indication of the subsidies which negatively affect meeting of the targets and the fulfilment of the obligations set out in this Regulation;

(w) a summary of the process for preparing and establishing the national restoration plan, including information on public participation and of how the needs of local communities and stakeholders have been considered;

(x) a dedicated section indicating how observations from the Commission on the draft national restoration plan referred to in Article 17(4) have been taken into account in accordance with Article 17(5); if the Member State concerned does not address an observation from the Commission or a substantial part thereof, that Member State shall provide its reasons.

4. The national restoration plan shall, where applicable, include the conservation and management measures that a Member State intends to adopt under the CFP, including conservation measures in joint recommendations that a Member State intends to initiate in accordance with the procedure set out in Regulation (EU) No 1380/2013 and referred to in Article 18 of this Regulation, and any relevant information on those measures.

5. The national restoration plan shall include an overview of the interplay between the measures included in the national restoration plan and the national CAP strategic plan.

6. Where appropriate, the national restoration plan shall include an overview of considerations related to the diversity of situations in various regions as referred to in Article 14(16), point (c).

7. The Commission shall, by means of implementing acts, establish a uniform format for the national restoration plan. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 24(2). The Commission shall be assisted by the EEA when drawing up the uniform format. By … [date: the first day of the month following three months from the date of entry into force of this Regulation], the Commission shall submit the draft implementing acts to the committee referred to in Article 24(1).

Article 16

Submission of the draft national restoration plan

Each Member State shall submit a draft of the national restoration plan referred to in Articles 14 and 15 to the Commission by … [the first day of the month following 24 months from the date of entry into force of this Regulation].

Article 17

Assessment of the national restoration plan

1. The Commission shall assess the draft national restoration plan within six months of the date of its receipt. When carrying out that assessment, the Commission shall act in close cooperation with the Member State.

2. When assessing the draft national restoration plan, the Commission shall evaluate:

   (a) its compliance with Article 15;

   (b) its adequacy for meeting the targets and fulfilling the obligations set out in Articles 4 to 13;

   (c) its contribution to the Union's overarching objectives and targets referred to in Article 1, the specific objectives referred to in Article 9(1) to restore at least 25 000 km of rivers into free-flowing rivers in the Union by 2030 and the commitment under Article 13 of planting at least three billion additional trees in the Union by 2030.

3. For the purpose of the assessment of the draft national restoration plan, the Commission shall be assisted by experts or the EEA.

4. The Commission may address its observations on the draft national restoration plan to the Member State within six months of the date of receipt of the draft national restoration plan.

5. The Member State shall take account of any observations from the Commission in its final national restoration plan.

6. The Member State shall finalise, publish and submit to the Commission the national restoration plan within six months from the date of receipt of observations from the Commission.

Article 18

Coordination of restoration measures in marine ecosystems

1. Member States whose national restoration plans include conservation measures to be adopted within the framework of the CFP shall make full use of the tools provided therein.

2. Where the national restoration plans include measures that require submission of a joint recommendation through the regionalisation procedure under Article 18 of the Regulation (EU) No 1380/2013, Member States preparing those national restoration plans shall, considering the deadlines provided for in Article 5 of this Regulation, initiate in a timely manner consultations with other Member States having a direct management interest affected by these measures and the relevant Advisory Councils under Article 18(2) of Regulation (EU) No 1380/2013 to enable timely agreement on and submission of any joint recommendations. For that purpose, they shall also include in the national restoration plan the estimated timing of the consultation and of the submission of the joint recommendations.

3. The Commission shall facilitate and monitor progress in the submission of joint recommendations under the CFP. Member States shall submit the joint recommendations on the conservation measures necessary to contribute to meeting the targets set in Article 5 at the latest 18 months before the respective deadline.

4. In the absence of joint recommendations referred to in paragraph 2 of this Article before the respective deadline referred to in paragraph 3 of this Article, concerning conservation measures necessary for compliance with obligations under Union environmental legislation referred to in Article 11 of Regulation (EU) No 1380/2013, the Commission may make full use of the tools provided for in Article 11(4) of that Regulation as and where appropriate under the conditions set out therein.

Article 19

Review of the national restoration plan

1. Each Member State shall review and revise its national restoration plan, and include supplementary measures, by 30 June 2032 and subsequently by 30 June 2042. At least once every ten years thereafter, each Member State shall review its national restoration plan and, if necessary, revise it and include supplementary measures.

   The reviews shall be carried out in accordance with Articles 14 and 15, taking into account progress made in the implementation of the plans, the best available scientific evidence as well as available knowledge of changes or expected changes in environmental conditions due to climate change. In the reviews to be carried out by 30 June 2032 and by 30 June 2042, Member States shall take into account the knowledge on the condition of habitat types listed in Annexes I and II acquired in accordance with Article 4(9) and Article 5(7). Each Member State shall publish and submit to the Commission its revised national restoration plan.

2. Where monitoring carried out in accordance with Article 20 indicates that the measures set out in the national restoration plan will not be sufficient to meet the restoration targets and fulfil the obligations set out in Articles 4 to 13, the Member State shall review the national restoration plan and, if necessary, revise it and include supplementary measures. Member States shall publish and submit to the Commission their revised national restoration plans.

3. Based on the information referred to in Article 21(1) and (2) and the assessment referred to in Article 21(4) and (5), if the Commission considers that the progress made by a Member State is insufficient to meet the targets and fulfil the obligations set out in Articles 4 to 13, the Commission may, after consultation with the Member State concerned, request the Member State to submit a revised draft national restoration plan with supplementary measures. The Member State shall publish that revised national restoration plan with supplementary measures and submit it to the Commission within six months from the date of receipt of the request from the Commission. Upon request of the Member State concerned and where duly justified, the Commission may extend that deadline by an additional six months.

Chapter IV
Monitoring and reporting

Article 20
Monitoring

1. Member States shall monitor the following:

(a) the condition and trend in the condition of the habitat types, and the quality and the trend in the quality of the habitats of the species referred to in Articles 4 and 5 in the areas subject to restoration measures on the basis of the monitoring referred to in Article 15(3), point (p);

(b) the area of urban green space and urban tree canopy cover within urban ecosystem areas, as referred to in Article 8 and determined in accordance with Article 14(4);

(c) at least two of the biodiversity indicators for agricultural ecosystems chosen by the Member State in accordance with Article 11(2);

(d) the populations of the common farmland bird species listed in Annex V;

(e) the biodiversity indicator for forest ecosystems referred to in Article 12(2);

(f) at least six of the biodiversity indicators for forest ecosystems chosen by the Member State in accordance with Article 12(3);

(g) the abundance and diversity of pollinator species, according to the method established in accordance with Article 10(2);

(h) the area and condition of the areas covered by the habitat types listed in Annexes I and II;

(i) the area and the quality of the habitat of the species referred to in Article 4(7), and Article 5(5);

(j) the extent and location of the areas where habitat types and habitats of the species have significantly deteriorated and of the areas subject to compensatory measures taken under Article 4(13), as well as the effectiveness of the compensatory measures to ensure that any deterioration of habitat types and habitats of the species is not significant at the level of each biogeographical region in their territory and to ensure that meeting the targets and fulfilling the objectives set out in Articles 1, 4 and 5 is not jeopardised.

2. The monitoring in accordance with paragraph 1, point (a), shall start as soon as the restoration measures are put in place.

3. The monitoring in accordance with paragraph 1, points (b), (c), (d), (e) and (f), shall start on … [date of entry into force of this Regulation].

4. The monitoring in accordance with paragraph 1, point (g), of this Article shall start one year after the entry into force of the delegated act referred to in Article 10(2).

5. The monitoring in accordance with paragraph 1, point (j), of this Article shall start as soon as the notification referred to in Article 4(13) is submitted to the Commission.

6. The monitoring in accordance with paragraph 1, points (a) and (b), shall be carried out at least every six years. The monitoring in accordance with paragraph 1, point (c), concerning, where applicable, the stock of organic carbon in cropland mineral soils and the share of agricultural land with high-diversity landscape features, and paragraph 1, point (f), concerning, where applicable, the standing deadwood, the lying deadwood, the share of forests with uneven-aged structure, the forest connectivity, the stock of organic carbon, the share of forest dominated by native tree species and the tree species diversity, shall be carried out at least every six years, or, where necessary to evaluate the achievement of increasing trends to 2030, within a shorter interval. The monitoring in accordance with paragraph 1, point (c), concerning, where applicable, the grassland butterfly index, paragraph 1, point (d), concerning the common farmland bird index and paragraph 1, point (e) concerning the common forest bird index, and paragraph 1, point (g) concerning pollinator species shall be carried out every year. The monitoring in accordance with paragraph 1, points (h) and (i), shall be carried out at least every six years and shall be coordinated with the reporting cycle under Article 17 of Directive 92/43/EEC and the initial assessment under Article 17 of Directive 2008/56/EC. The monitoring in accordance with paragraph 1, point (j), shall be carried out every three years.

7. Member States shall ensure that the indicators for agricultural ecosystems referred to in Article 11(2), point (b), and the indicators for forest ecosystems referred to in Article 12(3), points (a), (b) and (e), of this Regulation, are monitored in a manner consistent with the monitoring required under Regulations (EU) 2018/841 and (EU) 2018/1999.

8. Member States shall make public the data generated by the monitoring carried out under this Article, in accordance with Directive 2007/2/EC and in accordance with the monitoring frequencies set out in paragraph 6 of this Article.

9. Member State monitoring systems shall operate on the basis of electronic databases and geographic information systems, and shall maximise the access and use of data and services from remote sensing technologies, earth observation (Copernicus services), *in-situ* sensors and devices, or citizen science data, leveraging the opportunities offered by artificial intelligence, advanced data analysis and processing.

10. By 31 December 2028, the Commission shall establish a guiding framework for setting the satisfactory levels referred to in Article 8(2) and (3), Article 10(1) and Article 11(2), by means of implementing acts.

11. The Commission may, by means of implementing acts:

(a) specify the methods for monitoring the indicators for agricultural ecosystems listed in Annex IV;

(b) specify the methods for monitoring the indicators for forest ecosystems listed in Annex VI;

(c) establish a guiding framework for setting the satisfactory levels referred to in Article 12(2) and (3).

12. Implementing acts referred to in paragraphs (10) and (11) of this Article shall be adopted in accordance with the examination procedure referred to in Article 24(2).

Article 21

Reporting

1. By 30 June 2028 and at least every three years thereafter, Member States shall report electronically the following data to the Commission:

   (a) the area subject to restoration measures referred to in Articles 4 to 12;

   (b) the extent of the areas where habitat types and habitats of species have significantly deteriorated and of the areas subject to compensatory measures taken under Article 4(13);

   (c) the barriers referred to in Article 9 that have been removed; and

   (d) their contribution to the commitment referred to in Article 13.

2. By 30 June 2031, for the period up to 2030, and at least every six years thereafter, Member States shall report electronically the following data and information to the Commission, assisted by the EEA:

   (a) the progress in implementing the national restoration plan, in putting in place the restoration measures and progress in meeting the targets and fulfilling the obligations set out in Articles 4 to 13;

(b) information on:

(i) the location of the areas where habitat types or habitats of species have significantly deteriorated and of the areas subject to compensatory measures taken under Article 4(13);

(ii) a description of the effectiveness of the compensatory measures taken under Article 4(13) in ensuring that any deterioration of habitat types and habitats of species is not significant at the level of each biogeographical region in their territory;

(iii) a description of the effectiveness of the compensatory measures taken under Article 4(13) in ensuring that meeting the targets and fulfilling the objectives set out in Articles 1, 4 and 5 is not jeopardised.

(c) the results of the monitoring carried out in accordance with Article 20, including, in the case of the results of the monitoring carried out in accordance with Article 20(1), points (h) and (i), geographically referenced maps;

(d) the location and extent of the areas subject to restoration measures referred to in Articles 4 and 5, and Article 11(4), including a geographically referenced map of those areas;

(e) the updated inventory of barriers referred to in Article 9(1);

(f) information on the progress accomplished towards meeting financing needs, in accordance with Article 15(3), point (u), including a review of actual investment against initial investment assumptions.

3. The Commission shall establish the format, structure and detailed arrangements for the presentation of the information referred to in paragraphs 1 and 2 of this Article by means of implementing acts. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 24(2). When drawing up the format, structure and detailed arrangements for the electronic reporting, the Commission shall be assisted by the EEA.

4. By 31 December 2028 and every three years thereafter, the EEA shall provide to the Commission a technical overview of the progress towards the achievement of the targets and fulfilment of the obligations set out in this Regulation, on the basis of the data made available by Member States in accordance with paragraph 1 of this Article and Article 20(8).

5. By 30 June 2032 and every six years thereafter, the EEA shall provide to the Commission a Union-wide technical report on the progress towards meeting the targets and fulfilment of the obligations set out in this Regulation on the basis of the data made available by Member States in accordance with paragraphs 1, 2 and 3 of this Article. The EEA may also use information reported under Article 17 of Directive 92/43/EEC, Article 15 of Directive 2000/60/EC, Article 12 of Directive 2009/147/EC and Article 17 of Directive 2008/56/EC.

6. From … [five years from the date of entry into force of this Regulation], and every six years thereafter, the Commission shall report to the European Parliament and to the Council on the implementation of this Regulation.

7. By … [12 months from the date of entry into force of this Regulation], the Commission shall, in consultation with Member States, submit a report to the European Parliament and the Council containing:

(a) an overview of financial resources available at Union level for the purpose of implementing this Regulation;

(b) an assessment of the funding needs to implement Articles 4 to 13 and to achieve the objective set out in Article 1(2);

(c) an analysis to identify any funding gaps in the implementation of the obligations set out in this Regulation;

(d) where appropriate, proposals for adequate measures, including financial measures to address the gaps identified, such as the establishment of dedicated funding, and without prejudging the prerogatives of co-legislators for the adoption of the multiannual financial framework post 2027.

8. Member States shall ensure that the information referred to in paragraphs 1 and 2 of this Article is adequate and up-to-date and that it is available to the public in accordance with Directives 2003/4/EC, 2007/2/EC and (EU) 2019/1024.

Chapter V
Delegated and implementing acts

Article 22

Amendment of Annexes

1. The Commission is empowered to adopt delegated acts in accordance with Article 23 in order to amend Annex I by adapting the way the habitat types are grouped to technical and scientific progress and to take into account the experience gained from the application of this Regulation.

2. The Commission is empowered to adopt delegated acts in accordance with Article 23 in order to amend Annex II by adapting:

   (a) the list of habitat types to ensure consistency with updates to the European nature information system (EUNIS) habitat classification; and

   (b) the way the habitat types are grouped to technical and scientific progress and to take into account the experience gained from the application of this Regulation.

3. The Commission is empowered to adopt delegated acts in accordance with Article 23 in order to amend Annex III by adapting the list of marine species referred to in Article 5 to technical and scientific progress.

4. The Commission is empowered to adopt delegated acts in accordance with Article 23 in order to amend Annex IV by adapting the description, unit and methodology of biodiversity indicators for agricultural ecosystems to technical and scientific progress.

5. The Commission is empowered to adopt delegated acts in accordance with Article 23 in order to amend Annex V by adapting the list of species used for the common farmland bird index in the Member States to technical and scientific progress.

6. The Commission is empowered to adopt delegated acts in accordance with Article 23 in order to amend Annex VI by adapting the description, unit and methodology of biodiversity indicators for forest ecosystems to technical and scientific progress.

7. The Commission is empowered to adopt delegated acts in accordance with Article 23 in order to amend Annex VII by adapting the list of examples of restoration measures to technical and scientific progress and to take into account the experience gained from the application of this Regulation.

Article 23

Exercise of the delegation

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2. The power to adopt delegated acts referred to in Article 10(2) and Article 22(1) to (7) shall be conferred on the Commission for a period of five years from … [date of entry into force of this Regulation]. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

3. The delegation of power referred to in Article 10(2) and Article 22(1) to (7) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.

4. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.

5. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6. Delegated acts adopted pursuant to Article 10(2) or Article 22(1) to (7) shall enter into force only if no objection has been expressed either by the European Parliament or by the Council within a period of two months of notification of that act to the European Parliament and to the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

Article 24

Committee procedure

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.

2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Chapter VI
Final provisions

Article 25

Amendment to Regulation (EU) 2022/869

In Article 7(8) of Regulation (EU) 2022/869, the first subparagraph is replaced by the following:

‘With regard to the environmental impacts addressed in Article 6(4) of Directive 92/43/EEC, Article 4(7) of Directive 2000/60/EC and Article 4(14) and (15) and Article 5(11) and (12) of Regulation (EU) 2024/… of the European Parliament and of the Council[*+], provided that all the conditions set out in those Directives and that Regulation are fulfilled, projects on the Union list shall be considered as being of public interest from an energy policy perspective, and may be considered as having an overriding public interest.

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[*] Regulation (EU) 2024/… of … of the European Parliament and of the Council on nature restoration and amending Regulation (EU) 2022/869 (OJ L, …, ELI: …).’.

[+] OJ: Please insert in the text the number of the Regulation contained in document PE-CONS 74/23 - 2022/0195(COD) and insert the number, date, title and OJ reference of that Regulation in the footnote.

Article 26

Review

1. The Commission shall evaluate the application of this Regulation by 31 December 2033.

   The evaluation shall include an assessment of the impact of this Regulation on the agricultural, forestry and fisheries sectors, considering relevant links with food production and food security in the Union, and of the wider socio-economic effects of this Regulation.

2. The Commission shall present a report on the main findings of the evaluation to the European Parliament, the Council, the European Economic and Social Committee, and the Committee of Regions. Where the Commission finds it appropriate, the report shall be accompanied by a legislative proposal for amendment of relevant provisions of this Regulation, taking into account the need to establish additional restoration targets, including on updated targets for 2040 and 2050, based on common methods for assessing the condition of ecosystems not covered by Articles 4 and 5, the evaluation referred to in paragraph 1 of this Article, and the most recent scientific evidence.

Article 27

Temporary suspension

1. If an unforeseeable, exceptional and unprovoked event has occurred that is outside the control of the Union, with severe Union-wide consequences for the availability of land required to secure sufficient agricultural production for Union food consumption, the Commission shall adopt implementing acts which are both necessary and justifiable in an emergency. Such implementing acts may temporarily suspend the application of the relevant provisions of Article 11 to the extent and for such a period as is strictly necessary. Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 24(2).

2. Implementing acts adopted under paragraph 1 shall remain in force for a period not exceeding 12 months. If after that period the specific problems referred to in paragraph 1 persist, the Commission may submit an appropriate legislative proposal to renew that period.

3. The Commission shall inform the European Parliament and the Council of any act adopted under paragraph 1 within two working days of its adoption.

Article 28

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the European Parliament	*For the Council*
The President	*The President*

ANNEX I

TERRESTRIAL, COASTAL AND FRESHWATER ECOSYSTEMS – HABITAT TYPES AND GROUPS OF HABITAT TYPES REFERRED TO IN ARTICLE 4(1) AND (4)

The list below includes all terrestrial, coastal and freshwater habitat types listed in Annex I to Directive 92/43/EEC referred to in Article 4(1) and (4), as well as six groups of those habitat types, namely 1) wetlands (coastal and inland), 2) grasslands and other pastoral habitats, 3) river, lake, alluvial and riparian habitats, 4) forests, 5) steppe, heath and scrub habitats and 6) rocky and dune habitats.

1. GROUP 1: Wetlands (coastal & inland)

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
Coastal and salt habitats	
1130	Estuaries
1140	Mudflats and sandflats not covered by seawater at low tide
1150	Coastal lagoons
1310	*Salicornia* and other annuals colonizing mud and sand
1320	*Spartina* swards (*Spartinion maritimae*)
1330	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
1340	Inland salt meadows
1410	Mediterranean salt meadows (*Juncetalia maritimi*)
1420	Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*)

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
1530	Pannonic salt steppes and salt marshes
1650	Boreal Baltic narrow inlets
Wet heaths and peat grassland	
4010	Northern Atlantic wet heaths with *Erica tetralix*
4020	Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix*
6460	Peat grasslands of Troodos
Mires, bogs and fens	
7110	Active raised bogs
7120	Degraded raised bogs still capable of natural regeneration
7130	Blanket bogs
7140	Transition mires and quaking bogs
7150	Depressions on peat substrates of the *Rhynchosporion*
7160	Fennoscandian mineral-rich springs and springfens
7210	Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*
7220	Petrifying springs with tufa formation (*Cratoneurion*)
7230	Alkaline fens
7240	Alpine pioneer formations of the *Caricion bicoloris-atrofuscae*
7310	Aapa mires
7320	Palsa mires
Wet forests	
9080	Fennoscandian deciduous swamp woods
91D0	Bog woodland

2. GROUP 2: Grasslands and other pastoral habitats

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
Costal and dune habitats	
1630	Boreal Baltic coastal meadows
21A0	Machairs
Heath and scrub habitats	
4030	European dry heaths
4040	Dry Atlantic coastal heaths with *Erica vagans*
4090	Endemic oro-Mediterranean heaths with gorse
5130	*Juniperus communis* formations on heaths or calcareous grasslands
8240	Limestone pavements
Grasslands	
6110	Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi*
6120	Xeric sand calcareous grasslands
6130	Calaminarian grasslands of the *Violetalia calaminariae*
6140	Siliceous Pyrenean *Festuca eskia* grasslands
6150	Siliceous alpine and boreal grasslands
6160	Oro-Iberian *Festuca indigesta* grasslands
6170	Alpine and subalpine calcareous grasslands
6180	Macaronesian mesophile grasslands
6190	Rupicolous pannonic grasslands *(Stipo-Festucetalia pallentis*)
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco-Brometalia)*

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
6220	Pseudo-steppe with grasses and annuals of the *Thero-Brachypodietea*
6230	Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)
6240	Sub-Pannonic steppic grasslands
6250	Pannonic loess steppic grasslands
6260	Pannonic sand steppes
6270	Fennoscandian lowland species-rich dry to mesic grasslands
6280	Nordic alvar and precambrian calcareous flatrocks
62A0	Eastern sub-Mediterranean dry grasslands *(Scorzoneratalia villosae)*
62B0	Serpentinophilous grassland of Cyprus
62C0	Ponto-Sarmatic steppes
62D0	Oro-Moesian acidophilous grasslands
6410	*Molinia* meadows on calcareous, peaty or clayey-silt-laden soils *(Molinion caeruleae)*
6420	Mediterranean tall humid grasslands of the *Molinio-Holoschoenion*
6510	Lowland hay meadows (*Alopecurus pratensis, Sanguisorba officinalis*)
6520	Mountain hay meadows
Dehesas and wooded meadows	
6310	Dehesas with evergreen *Quercus* spp.
6530	Fennoscandian wooded meadows
9070	Fennoscandian wooded pastures

3. GROUP 3: River, lake, alluvial and riparian habitats

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
Rivers and lakes	
3110	Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*)
3120	Oligotrophic waters containing very few minerals generally on sandy soils of the West Mediterranean, with *Isoetes* spp.
3130	Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*
3140	Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp.
3150	Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* — type vegetation
3160	Natural dystrophic lakes and ponds
3170	Mediterranean temporary ponds
3180	Turloughs
3190	Lakes of gypsum karst
31A0	Transylvanian hot-spring lotus beds
3210	Fennoscandian natural rivers
3220	Alpine rivers and the herbaceous vegetation along their banks
3230	Alpine rivers and their ligneous vegetation with *Myricaria germanica*
3240	Alpine rivers and their ligneous vegetation with *Salix elaeagnos*
3250	Constantly flowing Mediterranean rivers with *Glaucium flavum*

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
3260	Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation
3270	Rivers with muddy banks with *Chenopodion rubri* p.p. and *Bidention* p.p. vegetation
3280	Constantly flowing Mediterranean rivers with *Paspalo-Agrostidion* species and hanging curtains of *Salix* and *Populus alba*
3290	Intermittently flowing Mediterranean rivers of the *Paspalo-Agrostidion*
32A0	Tufa cascades of karstic rivers of the Dinaric Alps
Alluvial meadows	
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels
6440	Alluvial meadows of river valleys of the *Cnidion dubii*
6450	Northern boreal alluvial meadows
6540	Sub-Mediterranean grasslands of the *Molinio-Hordeion secalini*
Alluvial/Riparian forests	
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the *Carpinion betuli*
91E0	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*)
91F0	Riparian mixed forests of *Quercus robur*, *Ulmus laevis* and *Ulmus minor*, *Fraxinus excelsior* or *Fraxinus angustifolia*, along the great rivers (*Ulmenion minoris*)
92A0	*Salix alba* and *Populus alba* galleries
92B0	Riparian formations on intermittent Mediterranean water courses with *Rhododendron ponticum*, *Salix* and others

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
92C0	*Platanus orientalis* and *Liquidambar orientalis* woods (*Platanion orientalis*)
92D0	Southern riparian galleries and thickets (*Nerio-Tamaricetea* and *Securinegion tinctoriae*)
9370	Palm groves of *Phoenix*

4. GROUP 4: Forests

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
Boreal forests	
9010	Western Taïga
9020	Fennoscandian hemiboreal natural old broad-leaved deciduous forests (*Quercus*, *Tilia*, *Acer*, *Fraxinus* or *Ulmus*) rich in epiphytes
9030	Natural forests of primary succession stages of landupheaval coast
9040	Nordic subalpine/subarctic forests with *Betula pubescens* ssp. *czerepanovii*
9050	Fennoscandian herb-rich forests with *Picea abies*
9060	Coniferous forests on, or connected to, glaciofluvial eskers
Temperate forests	
9110	*Luzulo-Fagetum* beech forests
9120	Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*)
9130	*Asperulo-Fagetum* beech forests

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
9140	Medio-European subalpine beech woods with *Acer* and *Rumex arifolius*
9150	Medio-European limestone beech forests of the *Cephalanthero-Fagion*
9170	*Galio-Carpinetum* oak-hornbeam forests
9180	*Tilio-Acerion* forests of slopes, screes and ravines
9190	Old acidophilous oak woods with *Quercus robur* on sandy plains
91A0	Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
91B0	Thermophilous *Fraxinus angustifolia* woods
91G0	Pannonic woods with *Quercus petraea* and *Carpinus betulus*
91H0	Pannonian woods with *Quercus pubescens*
91I0	Euro-Siberian steppic woods with *Quercus* spp.
91J0	*Taxus baccata* woods of the British Isles
91K0	Illyrian *Fagus sylvatica* forests (*Aremonio-Fagion*)
91L0	Illyrian oak-hornbeam forests (*Erythronio-Carpinion*)
91M0	Pannonian-Balkanic turkey oak – sessile oak forests
91P0	Holy Cross fir forest (*Abietetum polonicum*)
91Q0	Western Carpathian calcicolous *Pinus sylvestris* forests
91R0	Dinaric dolomite Scots pine forests (*Genisto januensis-Pinetum*)
91S0	Western Pontic beech forests
91T0	Central European lichen Scots pine forests
91U0	Sarmatic steppe pine forest
91V0	Dacian Beech forests (*Symphyto-Fagion*)

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
91W0	Moesian beech forests
91X0	Dobrogean beech forests
91Y0	Dacian oak & hornbeam forests
91Z0	Moesian silver lime woods
91AA	Eastern white oak woods
91BA	Moesian silver fir forests
91CA	Rhodopide and Balkan Range Scots pine forests
Mediterranean and Macaronesian forests	
9210	Apeninne beech forests with *Taxus* and *Ilex*
9220	Apennine beech forests with *Abies alba* and beech forests with *Abies nebrodensis*
9230	Galicio-Portuguese oak woods with *Quercus robur* and *Quercus pyrenaica*
9240	*Quercus faginea* and *Quercus canariensis* Iberian woods
9250	*Quercus trojana* woods
9260	*Castanea sativa* woods
9270	Hellenic beech forests with *Abies borisii-regis*
9280	*Quercus frainetto* woods
9290	*Cupressus* forests (*Acero-Cupression*)
9310	Aegean *Quercus brachyphylla* woods
9320	*Olea* and *Ceratonia* forests
9330	*Quercus suber* forests

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
9340	*Quercus ilex* and *Quercus rotundifolia* forests
9350	*Quercus macrolepis* forests
9360	Macaronesian laurel forests (*Laurus*, *Ocotea*)
9380	Forests of *Ilex aquifolium*
9390	Scrub and low forest vegetation with *Quercus alnifolia*
93A0	Woodlands with *Quercus infectoria* (*Anagyro foetidae-Quercetum infectoriae*)
Mountainous coniferous forests	
9410	Acidophilous *Picea* forests of the montane to alpine levels (*Vaccinio-Piceetea*)
9420	Alpine *Larix decidua* and/or *Pinus cembra* forests
9430	Subalpine and montane *Pinus uncinata* forests
9510	Southern Apennine *Abies alba* forests
9520	*Abies pinsapo* forests
9530	(Sub-) Mediterranean pine forests with endemic black pines
9540	Mediterranean pine forests with endemic Mesogean pines
9550	Canarian endemic pine forests
9560	Endemic forests with *Juniperus* spp.
9570	*Tetraclinis articulata* forests
9580	Mediterranean *Taxus baccata* woods
9590	*Cedrus brevifolia* forests (*Cedrosetum brevifoliae*)
95A0	High oro-Mediterranean pine forests

5. GROUP 5: Steppe, heath and scrub habitats

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
Salt and gypsum steppes	
1430	Halo-nitrophilous scrubs (*Pegano-Salsoletea*)
1510	Mediterranean salt steppes (*Limonietalia*)
1520	Iberian gypsum vegetation (*Gypsophiletalia*)
Temperate heath and scrub	
4050	Endemic macaronesian heaths
4060	Alpine and Boreal heaths
4070	Bushes with *Pinus mugo* and *Rhododendron hirsutum* (*Mugo-Rhododendretum hirsuti*)
4080	Sub-Arctic *Salix* spp. scrub
40A0	Subcontinental peri-Pannonic scrub
40B0	Rhodope *Potentilla fruticosa* thickets
40C0	Ponto-Sarmatic deciduous thickets
Sclerophyllous scrub (matorral)	
5110	Stable xerothermophilous formations with *Buxus sempervirens* on rock slopes (*Berberidion* p.p.)
5120	Mountain *Cytisus purgans* formations
5140	*Cistus palhinhae* formations on maritime wet heaths
5210	Arborescent matorral with *Juniperus* spp.
5220	Arborescent matorral with *Zyziphus*
5230	Arborescent matorral with *Laurus nobilis*
5310	*Laurus nobilis* thickets

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
5320	Low formations of *Euphorbia* close to cliffs
5330	Thermo-Mediterranean and pre-desert scrub
5410	West Mediterranean clifftop phryganas (*Astragalo-Plantaginetum subulatae*)
5420	*Sarcopoterium spinosum phryganas*
5430	Endemic phryganas of the *Euphorbio-Verbascion*

6. GROUP 6: Rocky and dune habitats

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
Sea cliffs, beaches, and islets	
1210	Annual vegetation of drift lines
1220	Perennial vegetation of stony banks
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts
1240	Vegetated sea cliffs of the Mediterranean coasts with endemic *Limonium* spp.
1250	Vegetated sea cliffs with endemic flora of the Macaronesian coasts
1610	Baltic esker islands with sandy, rocky and shingle beach vegetation and sublittoral vegetation
1620	Boreal Baltic islets and small islands
1640	Boreal Baltic sandy beaches with perennial vegetation
Coastal and inland dunes	
2110	Embryonic shifting dunes

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
2120	Shifting dunes along the shoreline with *Ammophila arenaria* (‘white dunes’)
2130	Fixed coastal dunes with herbaceous vegetation (‘grey dunes’)
2140	Decalcified fixed dunes with *Empetrum nigrum*
2150	Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)
2160	Dunes with *Hippophaë rhamnoides*
2170	Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*)
2180	Wooded dunes of the Atlantic, Continental and Boreal region
2190	Humid dune slacks
2210	*Crucianellion maritimae* fixed beach dunes
2220	Dunes with *Euphorbia terracina*
2230	*Malcolmietalia* dune grasslands
2240	*Brachypodietalia* dune grasslands with annuals
2250	Coastal dunes with *Juniperus* spp.
2260	*Cisto-Lavenduletalia* dune sclerophyllous scrubs
2270	Wooded dunes with *Pinus pinea* and/or *Pinus pinaster*
2310	Dry sand heaths with *Calluna* and *Genista*
2320	Dry sand heaths with *Calluna* and *Empetrum nigrum*
2330	Inland dunes with open *Corynephorus* and *Agrostis* grasslands
2340	Pannonic inland dunes
91N0	Pannonic inland sand dune thicket (*Junipero-Populetum albae*)
Rocky habitats	
8110	Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*)

Habitat type code as referred to in Annex I to Directive 92/43/EEC	Habitat type name as referred to in Annex I to Directive 92/43/EEC
8120	Calcareous and calcshist screes of the montane to alpine levels (*Thlaspietea rotundifolii*)
8130	Western Mediterranean and thermophilous scree
8140	Eastern Mediterranean screes
8150	Medio-European upland siliceous screes
8160	Medio-European calcareous scree of hill and montane levels
8210	Calcareous rocky slopes with chasmophytic vegetation
8220	Siliceous rocky slopes with chasmophytic vegetation
8230	Siliceous rock with pioneer vegetation of the *Sedo-Scleranthion* or of the *Sedo albi-Veronicion dillenii*
8310	Caves not open to the public
8320	Fields of lava and natural excavations
8340	Permanent glaciers

ANNEX II

MARINE ECOSYSTEMS – HABITAT TYPES AND GROUPS OF HABITAT TYPES REFERRED TO IN ARTICLE 5(1) AND (2)

The list below includes the marine habitat types referred to in Article 5(1) and (2), as well as seven groups of those habitat types, namely 1) seagrass beds, 2) macroalgal forests, 3) shellfish beds, 4) maerl beds, 5) sponge, coral and coralligenous beds, 6) vents and seeps and 7) soft sediments (not deeper than 1 000 metres of depth). The relation with the habitat types listed in Annex I to Directive 92/43/EEC is also presented.

The classification of marine habitat types used, differentiated by marine biogeographical regions, is made according to the European nature information system (EUNIS), as revised for the marine habitats typology in 2022 by the EEA. The information on the related habitats listed in Annex I to Directive 92/43/EEC is based on the crosswalk published by the EEA in 2021[1].

[1] EUNIS marine habitat classification 2022. European Environment Agency https://www.eea.europa.eu/data-and-maps/data/eunis-habitat-classification-1.

1. Group 1: Seagrass beds

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Atlantic		
MA522	Seagrass beds on Atlantic littoral sand	1140; 1160
MA623	Seagrass beds on Atlantic littoral mud	1140; 1160
MB522	Seagrass beds on Atlantic infralittoral sand	1110; 1150; 1160
Baltic Sea		
MA332	Baltic hydrolittoral coarse sediment characterised by submerged vegetation	1130; 1160; 1610; 1620
MA432	Baltic hydrolittoral mixed sediment characterised by submerged vegetation	1130; 1140; 1160; 1610
MA532	Baltic hydrolittoral sand characterised by submerged rooted plants	1130; 1140; 1160; 1610
MA632	Baltic hydrolittoral mud dominated by submerged rooted plants	1130; 1140; 1160; 1650
MB332	Baltic infralittoral coarse sediment characterised by submerged rooted plants	1110; 1160
MB432	Baltic infralittoral mixed sediment characterised by submerged rooted plants	1110; 1160; 1650
MB532	Baltic infralittoral sand characterised by submerged rooted plants	1110; 1130; 1150; 1160
MB632	Baltic infralittoral mud sediment characterised by submerged rooted plants	1130; 1150; 1160; 1650

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Black Sea		
MB546	Seagrass and rhizomatous algal meadows in Black Sea freshwater influenced infralittoral muddy sands	1110; 1130; 1160
MB547	Black Sea seagrass meadows on moderately exposed upper infralittoral clean sands	1110; 1160
MB548	Black Sea seagrass meadows on lower infralittoral sands	1110; 1160
Mediterranean Sea		
MB252	Biocenosis of *Posidonia oceanica*	1120
MB2521	Ecomorphosis of striped *Posidonia oceanica* meadows	1120; 1130; 1160
MB2522	Ecomorphosis of 'barrier-reef' *Posidonia oceanica* meadows	1120; 1130; 1160
MB2523	Facies of dead 'mattes' of *Posidonia oceanica* without much epiflora	1120; 1130; 1160
MB2524	Association with *Caulerpa prolifera* on *Posidonia* beds	1120; 1130; 1160
MB5521	Association with *Cymodocea nodosa* on well sorted fine sands	1110; 1130; 1160
MB5534	Association with *Cymodocea nodosa* on superficial muddy sands in sheltered waters	1110; 1130; 1160
MB5535	Association with *Zostera noltei* on superficial muddy sands in sheltered waters	1110; 1130; 1160
MB5541	Association with *Ruppia cirrhosa* and/or *Ruppia maritima* on sand	1110; 1130; 1160
MB5544	Association with *Zostera noltei* in euryhaline and eurythermal environment on sand	1110; 1130; 1160
MB5545	Association with *Zostera marina* in euryhaline and eurythermal environment	1110; 1130; 1160

2. Group 2: Macroalgal forests

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Atlantic		
MA123	Seaweed communities on full salinity Atlantic littoral rock	1160; 1170; 1130
MA125	Fucoids on variable salinity Atlantic littoral rock	1170; 1130
MB121	Kelp and seaweed communities on Atlantic infralittoral rock	1170; 1160
MB123	Kelp and seaweed communities on sediment-affected or disturbed Atlantic infralittoral rock	1170; 1160
MB124	Kelp communities on variable salinity Atlantic infralittoral rock	1170; 1130; 1160
MB321	Kelp and seaweed communities on Atlantic infralittoral coarse sediment	1160
MB521	Kelp and seaweed communities on Atlantic infralittoral sand	1160
MB621	Vegetated communities on Atlantic infralittoral mud	1160
Baltic Sea		
MA131	Baltic hydrolittoral rock and boulders characterised by perennial algae	1160; 1170; 1130; 1610; 1620
MB131	Perennial algae on Baltic infralittoral rock and boulders	1170; 1160
MB232	Baltic infralittoral bottoms characterised by shell gravel	1160; 1110
MB333	Baltic infralittoral coarse sediment characterised by perennial algae	1110; 1160
MB433	Baltic infralittoral mixed sediment characterised by perennial algae	1110; 1130; 1160; 1170

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Black Sea		
MB144	Mytilid-dominated Black Sea exposed upper infralittoral rock with fucales	1170; 1160
MB149	Mytilid-dominated Black Sea moderately exposed upper infralittoral rock with fucales	1170; 1160
MB14A	Fucales and other algae on Black Sea sheltered upper infralittoral rock, well illuminated	1170; 1160
Mediterranean Sea		
MA1548	Association with *Fucus virsoides*	1160; 1170
MB1512	Association with *Cystoseira tamariscifolia* and *Saccorhiza polyschides*	1170; 1160
MB1513	Association with *Cystoseira amentacea* (var. *amentacea*, var. *stricta*, var. *spicata*)	1170; 1160
MB151F	Association with *Cystoseira brachycarpa*	1170; 1160
MB151G	Association with *Cystoseira crinita*	1170; 1160
MB151H	Association with *Cystoseira crinitophylla*	1170; 1160
MB151J	Association with *Cystoseira sauvageauana*	1170; 1160
MB151K	Association with *Cystoseira spinosa*	1170; 1160
MB151L	Association with *Sargassum vulgare*	1170; 1160
MB151M	Association with *Dictyopteris polypodioides*	1170; 1160
MB151W	Association with *Cystoseira compressa*	1170; 1160
MB1524	Association with *Cystoseira barbata*	1170; 1160
MC1511	Association with *Cystoseira zosteroides*	1170; 1160

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
MC1512	Association with *Cystoseira usneoides*	1170; 1160
MC1513	Association with *Cystoseira dubia*	1170; 1160
MC1514	Association with *Cystoseira corniculata*	1170; 1160
MC1515	Association with *Sargassum* spp.	1170; 1160
MC1518	Association with *Laminaria ochroleuca*	1170; 1160
MC3517	Association with *Laminaria rodriguezii* on detritic beds	1160

3. Group 3: Shellfish beds

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Atlantic		
MA122	*Mytilus edulis* and/or barnacle communities on wave-exposed Atlantic littoral rock	1160; 1170
MA124	Mussel and/or barnacle communities with seaweeds on Atlantic littoral rock	1160; 1170
MA227	Bivalve reefs in the Atlantic littoral zone	1170; 1140
MB222	Bivalve reefs in the Atlantic infralittoral zone	1170; 1130; 1160
MC223	Bivalve reefs in the Atlantic circalittoral zone	1170
Baltic Sea		
MB231	Baltic infralittoral bottoms dominated by epibenthic bivalves	1170; 1160
MC231	Baltic circalittoral bottoms dominated by epibenthic bivalves	1170; 1160; 1110
MD231	Baltic offshore circalittoral biogenic bottoms characterised by epibenthic bivalves	1170

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
MD232	Baltic offshore circalittoral shell gravel bottoms characterised by bivalves	1170
MD431	Baltic offshore circalittoral mixed bottoms characterised by macroscopic epibenthic biotic structures	
MD531	Baltic offshore circalittoral sand characterised by macroscopic epibenthic biotic structures	
MD631	Baltic offshore circalittoral mud characterised by epibenthic bivalves	
Black Sea		
MB141	Invertebrate-dominated Black Sea lower infralittoral rock	1170
MB143	Mytilid-dominated Black Sea exposed upper infralittoral rock with foliose algae (no Fucales)	1170; 1160
MB148	Mytilid-dominated Black Sea moderately exposed upper infralittoral rock with foliose algae (other than Fucales)	1170; 1160
MB242	Mussel beds in the Black Sea infralittoral zone	1170; 1130; 1160
MB243	Oyster reefs on Black Sea lower infralittoral rock	1170
MB642	Black Sea infralittoral terrigenous muds	1160
MC141	Invertebrate-dominated Black Sea circalittoral rock	1170
MC241	Mussel beds on Black Sea circalittoral terrigenous muds	1170
MC645	Black Sea lower circalittoral mud	
Mediterranean Sea		
MA1544	Facies with *Mytilus galloprovincialis* in waters enriched in organic matter	1160; 1170
MB1514	Facies with *Mytilus galloprovincialis*	1170; 1160
	Mediterranean infralittoral oyster beds	
	Mediterranean circalittoral oyster beds	

4. Group 4: Maerl beds

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Atlantic		
MB322	Maerl beds on Atlantic infralittoral coarse sediment	1110; 1160
MB421	Maerl beds on Atlantic infralittoral mixed sediment	1110; 1160
MB622	Maerl beds on Atlantic infralittoral muddy sediment	1110; 1160
Mediterranean Sea		
MB3511	Association with rhodolithes in coarse sands and fine gravels mixed by waves	1110; 1160
MB3521	Association with rhodolithes in coarse sands and fine gravels under the influence of bottom currents	1110; 1160
MB3522	Association with maerl (= Association with *Lithothamnion corallioides* and *Phymatolithon calcareum*) on Mediterranean coarse sands and gravel	1110; 1160
MC3521	Association with rhodolithes on coastal detritic bottoms	1110
MC3523	Association with maerl (*Lithothamnion corallioides* and *Phymatholithon calcareum*) on coastal dendritic bottoms	1110

5. Group 5: Sponge, coral and coralligenous beds

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Atlantic		
MC121	Faunal turf communities on Atlantic circalittoral rock	1170
MC124	Faunal communities on variable salinity Atlantic circalittoral rock	1170; 1130

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
MC126	Communities of Atlantic circalittoral caves and overhangs	8330; 1170
MC222	Cold water coral reefs in the Atlantic circalittoral zone	1170
MD121	Sponge communities on Atlantic offshore circalittoral rock	1170
MD221	Cold water coral reefs in the Atlantic offshore circalittoral zone	1170
ME122	Sponge communities on Atlantic upper bathyal rock	1170
ME123	Mixed cold water coral communities on Atlantic upper bathyal rock	1170
ME221	Atlantic upper bathyal cold water coral reef	1170
ME322	Mixed cold water coral community on Atlantic upper bathyal coarse sediment	
ME324	Sponge aggregation on Atlantic upper bathyal coarse sediment	
ME422	Sponge aggregation on Atlantic upper bathyal mixed sediment	
ME623	Sponge aggregation on Atlantic upper bathyal mud	
ME624	Erect coral field on Atlantic upper bathyal mud	
MF121	Mixed cold water coral community on Atlantic lower bathyal rock	1170
MF221	Atlantic lower bathyal cold water coral reef	1170
MF321	Mixed cold water coral community on Atlantic lower bathyal coarse sediment	
MF622	Sponge aggregation on Atlantic lower bathyal mud	
MF623	Erect coral field on Atlantic lower bathyal mud	

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Baltic Sea		
MB138	Baltic infralittoral rock and boulders characterized by epibenthic sponges	1170; 1160
MB43A	Baltic infralittoral mixed sediment characterized by epibenthic sponges (Porifera)	1160; 1170
MC133	Baltic circalittoral rock and boulders characterized by epibenthic cnidarians	1170; 1160
MC136	Baltic circalittoral rock and boulders characterized by epibenthic sponges	1170; 1160
MC433	Baltic circalittoral mixed sediment characterized by epibenthic cnidarians	1160; 1170
MC436	Baltic circalittoral mixed sediment characterized by epibenthic sponges	1160
Black Sea		
MD24	Black Sea offshore circalittoral biogenic habitats	1170
ME14	Black Sea upper bathyal rock	1170
ME24	Black Sea upper bathyal biogenic habitat	1170
MF14	Black Sea lower bathyal rock	1170
Mediterranean Sea		
MB151E	Facies with *Cladocora caespitosa*	1170; 1160
MB151Q	Facies with *Astroides calycularis*	1170; 1160
MB151α	Facies and association of coralligenous biocenosis (in enclave)	1170; 1160
MC1519	Facies with *Eunicella cavolini*	1170; 1160

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
MC151A	Facies with *Eunicella singularis*	1170; 1160
MC151B	Facies with *Paramuricea clavata*	1170; 1160
MC151E	Facies with *Leptogorgia sarmentosa*	1170; 1160
MC151F	Facies with *Anthipatella subpinnata* and sparse red algae	1170; 1160
MC151G	Facies with massive sponges and sparse red algae	1170; 1160
MC1522	Facies with *Corallium rubrum*	8330; 1170
MC1523	Facies with *Leptopsammia pruvoti*	8330; 1170
MC251	Coralligenous platforms	1170
MC6514	Facies of sticky muds with *Alcyonium palmatum* and *Parastichopus regalis* on circalittoral mud	1160
MD151	Biocenosis of Mediterranean shelf-edge rock	1170
MD25	Mediterranean offshore circalittoral biogenic habitats	1170
MD6512	Facies of sticky muds with *Alcyonium palmatum* and *Parastichopus regalis* on lower circalittoral mud	
ME1511	Mediterranean upper bathyal *Lophelia pertusa* reefs	1170
ME1512	Mediterranean upper bathyal *Madrepora oculata* reefs	1170
ME1513	Mediterranean upper bathyal *Madrepora oculata* and *Lophelia pertusa* reefs	1170
ME6514	Mediterranean upper bathyal facies of with *Pheronema carpenteri*	
MF1511	Mediterranean lower bathyal *Lophelia pertusa* reefs	1170
MF1512	Mediterranean lower bathyal *Madrepora oculata* reefs	1170

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
MF1513	Mediterranean lower bathyal *Madrepora oculata* and *Lophelia pertusa* reefs	1170
MF6511	Mediterranean lower bathyal facies of sandy muds with *Thenea muricata*	
MF6513	Mediterranean lower bathyal facies of compact muds with *Isidella elongata*	

6. Group 6: Vents and seeps

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Atlantic		
MB128	Vents and seeps in Atlantic infralittoral rock	1170; 1160; 1180
MB627	Vents and seeps in Atlantic infralittoral mud	1130; 1160
MC127	Vents and seeps in Atlantic circalittoral rock	1170; 1180
MC622	Vents and seeps in Atlantic circalittoral mud	1160
MD122	Vents and seeps on Atlantic offshore circalittoral rock	1170
MD622	Vents and seeps in Atlantic offshore circalittoral mud	

7. Group 7: Soft sediments (not deeper than 1 000 metres of depth)

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
Atlantic		
MA32	Atlantic littoral coarse sediment	1130; 1160
MA42	Atlantic littoral mixed sediment	1130; 1140; 1160
MA52	Atlantic littoral sand	1130; 1140; 1160
MA62	Atlantic littoral mud	1130; 1140; 1160
MB32	Atlantic infralittoral coarse sediment	1110; 1130; 1160
MB42	Atlantic infralittoral mixed sediment	1110; 1130; 1150; 1160
MB52	Atlantic infralittoral sand	1110; 1130; 1150; 1160
MB62	Atlantic infralittoral mud	1110; 1130; 1160
MC32	Atlantic circalittoral coarse sediment	1110; 1160
MC42	Atlantic circalittoral mixed sediment	1110; 1160
MC52	Atlantic circalittoral sand	1110; 1160
MC62	Atlantic circalittoral mud	1160
MD32	Atlantic offshore circalittoral coarse sediment	
MD42	Atlantic offshore circalittoral mixed sediment	
MD52	Atlantic offshore circalittoral sand	
MD62	Atlantic offshore circalittoral mud	
ME32	Atlantic upper bathyal coarse sediment	

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
ME42	Atlantic upper bathyal mixed sediment	
ME52	Atlantic upper bathyal sand	
ME62	Atlantic upper bathyal mud	
MF32	Atlantic lower bathyal coarse sediment	
MF42	Atlantic lower bathyal mixed sediment	
MF52	Atlantic lower bathyal sand	
MF62	Atlantic lower bathyal mud	
Baltic Sea		
MA33	Baltic hydrolittoral coarse sediment	1130; 1160; 1610; 1620
MA43	Baltic hydrolittoral mixed sediment	1130; 1140; 1160; 1610
MA53	Baltic hydrolittoral sand	1130; 1140; 1160; 1610
MA63	Baltic hydrolittoral mud	1130; 1140; 1160; 1650
MB33	Baltic infralittoral coarse sediment	1110; 1150; 1160
MB43	Baltic infralittoral mixed sediment	1110; 1130; 1150; 1160; 1170; 1650
MB53	Baltic infralittoral sand	1110; 1130; 1150; 1160
MB63	Baltic infralittoral mud	1130; 1150; 1160; 1650

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
MC33	Baltic circalittoral coarse sediment	1110; 1160
MC43	Baltic circalittoral mixed sediment	1160; 1170
MC53	Baltic circalittoral sand	1110; 1160
MC63	Baltic circalittoral mud	1160; 1650
MD33	Baltic offshore circalittoral coarse sediment	
MD43	Baltic offshore circalittoral mixed sediment	
MD53	Baltic offshore circalittoral sand	
MD63	Baltic offshore circalittoral mud	
Black Sea		
MA34	Black Sea littoral coarse sediment	1160
MA44	Black Sea littoral mixed sediment	1130; 1140; 1160
MA54	Black Sea littoral sand	1130; 1140; 1160
MA64	Black Sea littoral mud	1130; 1140; 1160
MB34	Black Sea infralittoral coarse sediment	1110; 1160
MB44	Black Sea infralittoral mixed sediment	1110; 1170
MB54	Black Sea infralittoral sand	1110; 1130; 1160
MB64	Black Sea infralittoral mud	1130; 1160
MC34	Black Sea circalittoral coarse sediment	1160
MC44	Black Sea circalittoral mixed sediment	
MC54	Black Sea circalittoral sand	1160
MC64	Black Sea circalittoral mud	1130; 1160
MD34	Black Sea offshore circalittoral coarse sediment	

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
MD44	Black Sea offshore circalittoral mixed sediment	
MD54	Black Sea offshore circalittoral sand	
MD64	Black Sea offshore circalittoral mud	
Mediterranean Sea		
MA35	Mediterranean littoral coarse sediment	1160; 1130
MA45	Mediterranean littoral mixed sediment	1140; 1160
MA55	Mediterranean littoral sand	1130; 1140; 1160
MA65	Mediterranean littoral mud	1130; 1140; 1150; 1160
MB35	Mediterranean infralittoral coarse sediment	1110; 1160
MB45	Mediterranean infralittoral mixed sediment	
MB55	Mediterranean infralittoral sand	1110; 1130; 1150; 1160
MB65	Mediterranean infralittoral mud	1130; 1150
MC35	Mediterranean circalittoral coarse sediment	1110; 1160
MC45	Mediterranean circalittoral mixed sediment	
MC55	Mediterranean circalittoral sand	1110; 1160
MC65	Mediterranean circalittoral mud	1130; 1160
MD35	Mediterranean offshore circalittoral coarse sediment	
MD45	Mediterranean offshore circalittoral mixed sediment	
MD55	Mediterranean offshore circalittoral sand	
MD65	Mediterranean offshore circalittoral mud	
ME35	Mediterranean upper bathyal coarse sediment	

EUNIS code	EUNIS habitat type name	Related habitat type code as referred to in Annex I to Directive 92/43/EEC
ME45	Mediterranean upper bathyal mixed sediment	
ME55	Mediterranean upper bathyal sand	
ME65	Mediterranean upper bathyal mud	
MF35	Mediterranean lower bathyal coarse sediment	
MF45	Mediterranean lower bathyal mixed sediment	
MF55	Mediterranean lower bathyal sand	
MF65	Mediterranean lower bathyal mud	

ANNEX III

MARINE SPECIES REFERRED TO IN ARTICLE 5(5)

(1) dwarf sawfish (*Pristis clavata*);

(2) smalltooth sawfish (*Pristis pectinata*);

(3) largetooth sawfish (*Pristis pristis*);

(4) basking shark (*Cetorhinus maximus*) and white shark (*Carcharodon carcharias*);

(5) smooth lantern shark (*Etmopterus pusillus*);

(6) reef manta ray (*Mobula alfredi*);

(7) giant manta ray (*Mobula birostris*);

(8) devil fish (*Mobula mobular*);

(9) lesser Guinean devil ray (*Mobula rochebrunei*);

(10) spinetail mobula (*Mobula japanica*);

(11) smoothtail mobula (*Mobula thurstoni*);

(12) longhorned mobula (*Mobula eregoodootenkee*);

(13) Chilean devil ray (*Mobula tarapacana*);

(14) shortfin devil ray (*Mobula kuhlii*);

(15) lesser devil ray (*Mobula hypostoma*);

(16) Norwegian skate (*Dipturus nidarosiensis*);

(17) white skate (*Rostroraja alba*);

(18) guitarfishes (*Rhinobatidae*);

(19) angel shark (*Squatina squatina*);

(20) salmon (*Salmo salar*);

(21) sea trout (*Salmo trutta*);

(22) houting (*Coregonus oxyrhynchus*).

ANNEX IV

LIST OF BIODIVERSITY INDICATORS FOR AGRICULTURAL ECOSYSTEMS REFERRED TO IN ARTICLE 11(2)

Indicator	**Description, units, and methodology for determining and monitoring the indicator**
Grassland butterfly index	**Description:** This indicator is composed of species considered to be characteristic of European grasslands and which occur in a large part of Europe, covered by the majority of the Butterfly Monitoring Schemes. It is based on the geometric mean of species trends. **Unit:** Index. **Methodology:** as developed and used by Butterfly Conservation Europe, Van Swaay, C.A.M, *Assessing Butterflies in Europe - Butterfly Indicators 1990-2018,* Technical report, Butterfly Conservation Europe, 2020.
Stock of organic carbon in cropland mineral soils	**Description:** This indicator describes the stock of organic carbon in cropland mineral soils at a depth of 0 to 30 cm. **Unit:** Tonnes of organic carbon/ha. **Methodology:** as set out in Annex V to Regulation (EU) 2018/1999 in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, and as supported by the Land Use and Coverage Area frame Survey (LUCAS) Soil, Jones A. et al., *LUCAS Soil 2022,* JRC technical report, Publications Office of the European Union, 2021.

Indicator	Description, units, and methodology for determining and monitoring the indicator
Share of agricultural land with high-diversity landscape features	**Description:** High-diversity landscape features, such as buffer strips, hedgerows, individual or groups of trees, tree rows, field margins, patches, ditches, streams, small wetlands, terraces, cairns, stonewalls, small ponds and cultural features, are elements of permanent natural or semi-natural vegetation present in an agricultural context which provide ecosystem services and support for biodiversity. In order to do so, landscape features need to be subject to as little negative external disturbances as possible to provide safe habitats for various taxa, and therefore need to comply with the following conditions: (a) they cannot be under productive agricultural use (including grazing or fodder production), unless such use is necessary for the preservation of biodiversity; and (b) they should not receive fertilizer or pesticide treatment, except for low input treatment with solid manure. Land lying fallow, including temporarily, can be considered as high diversity landscape features if it complies with criteria set out under (a) and (b) of the second paragraph. Productive trees part of sustainable agroforestry systems or trees in extensive old orchards on permanent grassland and productive elements in hedges can also be considered as high diversity landscape features, if they comply with criterion set out under (b) of the second paragraph, and if harvests take place only at moments where it would not compromise high biodiversity levels.

Indicator	Description, units, and methodology for determining and monitoring the indicator
	Unit: Percent (share of Utilised Agricultural Area). **Methodology:** as developed under indicator I.21, Annex I to Regulation (EU) 2021/2115, as based on latest updated version of LUCAS for landscape elements, Ballin M. et al., *Redesign sample for Land Use/Cover Area frame Survey (LUCAS)*, Eurostat 2018, and for land laying fallow, *Farm Structure, Reference Metadata in Single Integrated Metadata Structure*, online publication, Eurostat and, where applicable, for high diversity landscape features not covered by the methodology above, methodology developed by Member States in accordance with Article 11(7) of this Regulation. The LUCAS methodology is updated on a regular basis to enhance the reliability of the data used in the Union and, at national level, by Member States when implementing their national restoration plans.

ANNEX V

COMMON FARMLAND BIRD INDEX AT NATIONAL LEVEL

Description

The common farmland bird index summarises population trends of common and widespread birds of farmland and is intended as a proxy to assess the biodiversity status of agricultural ecosystems in Europe. The national common farmland bird index is a composite, multispecies index that measures the rate of change in the relative abundance of farmland bird species across selected survey sites at national level. That index is based on specially selected species that are dependent on farmland habitats for feeding or nesting, or both. National common farmland bird indices are based on species sets that are relevant to each Member State. The national common farmland bird index is calculated with reference to a base year when the index value is typically set at 100. Trend values express the overall population change in the population size of the constituent farmland birds over a period of years.

Methodology: Brlík et al. (2021): Long-term and large-scale multispecies dataset tracking population changes of common European breeding birds. Sci Data 8, 21. https://doi.org/10.1038/s41597-021-00804-2

'Member States with historically more depleted populations of farmland birds' means Member States where half or more species contributing to the national common farmland bird index have a negative long-term population trend. In Member States where information on long-term population trends is not available for some species, information on the European status of species is used.

These Member States are:

Czechia

Denmark

Germany

Estonia

Spain

France

Italy

Luxembourg

Hungary

Netherlands

Finland

‘Member States with historically less depleted populations of farmland birds’ means Member States where less than half of species contributing to the national common farmland bird index have a negative long-term population trend. In Member States, where information on long-term population trends is not available for some species, information on the European status of species is used.

These Member States are:

Belgium

Bulgaria

Ireland

Greece

Croatia

Cyprus

Latvia

Lithuania

Malta

Austria

Poland

Portugal

Romania

Slovenia

Slovakia

Sweden

List of species used for the common farmland bird index in the Member States

Belgium - Flanders	**Belgium - Wallonia**
Alauda arvensis	*Alauda arvensis*
Anthus pratensis	*Anthus pratensis*
Emberiza citrinella	*Corvus frugilegus*
Falco tinnunculus	*Emberiza citrinella*
Haematopus ostralegus	*Falco tinnunculus*
Hirundo rustica	*Hirundo rustica*
Limosa limosa	*Lanius collurio*
Linaria cannabin	*Linaria cannabina*
Motacilla flava	*Miliaria calandra*
Numenius arquata	*Motacilla flava*
Passer montanus	*Passer montanus*
Perdix perdi	*Perdix perdix*
Saxicola torquatus	*Saxicola torquatus*
Sylvia communis	*Streptopelia turtur*
Vanellus vanellus	*Sturnus vulgaris*
	Sylvia communis
	Vanellus vanellus

Bulgaria

Alauda arvensis

Carduelis carduelis

Coturnix coturnix

Corvus frugilegus

Emberiza hortulana

Emberiza melanocephala

Falco tinnunculus

Galerida cristata

Hirundo rustica

Lanius collurio

Linaria cannabina

Miliaria calandra

Motacilla flava

Perdix perdix

Passer montanus

Sylvia communis

Streptopelia turtur

Sturnus vulgaris

Upupa epops

Czechia

Alauda arvensis

Anthus pratensis

Ciconia ciconia

Corvus frugilegus

Emberiza citrinella

Falco tinnunculus

Hirundo rustica

Lanius collurio

Linaria cannabina

Miliaria calandra

Motacilla flava

Passer montanus

Perdix perdix

Saxicola rubetra

Saxicola torquatus

Serinus serinus

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Vanellus vanellus

Denmark

Alauda arvensis

Anthus pratensis

Carduelis carduelis

Corvus corone

Corvus frugilegus

Emberiza citrinella

Falco tinnunculus

Gallinago gallinago

Hirundo rustica

Lanius collurio

Linaria cannabina

Miliaria calandra

Motacilla alba

Motacilla flava

Oenanthe oenanthe

Passer montanus

Perdix perdix

Saxicola rubetra

Sylvia communis

Sylvia curruca

Turdus pilaris

Vanellus vanellus

Germany

Alauda arvensis

Athene noctua

Emberiza citrinella

Lanius collurio

Limosa limosa

Lullula arborea

Miliaria calandra

Milvus milvus

Saxicola rubetra

Vanellus vanellus

Estonia

Alauda arvensis

Anthus pratensis

Corvus frugilegus

Emberiza citrinella

Hirundo rustica

Lanius collurio

Linaria cannabina

Motacilla flava

Passer montanus

Saxicola rubetra

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Vanellus vanellus

Ireland

Carduelis carduelis

Columba oenas

Columba palumbus

Corvus cornix

Corvus frugilegus

Corvus monedula

Emberiza citrinella

Falco tinnunculus

Fringilla coelebs

Hirundo rustica

Chloris chloris

Linaria cannabina

Motacilla alba

Passer domesticus

Phasianus colchicus

Pica pica

Saxicola torquatus

Sturnus vulgaris

Greece

Alauda arvensis

Apus apus

Athene noctua

Calandrella brachydactyla

Carduelis carduelis

Carduelis chloris

Ciconia ciconia

Corvus corone

Corvus monedula

Delichon urbicum

Emberiza cirlus

Emberiza hortulana

Emberiza melanocephala

Falco naumanni

Falco tinnunculus

Galerida cristata

Hirundo daurica

Hirundo rustica

Lanius collurio

Lanius minor

Lanius senator

Linaria cannabina

Lullula arborea

Luscinia megarhynchos

Melanocorypha calandra

Miliaria calandra

Motacilla flava

Oenanthe hispanica

Oenanthe oenanthe

Passer domesticus

Passer hispaniolensis

Passer montanus

Pica pica

Saxicola rubetra

Saxicola torquatus

Streptopelia decaocto

Streptopelia turtur

Sturnus vulgaris

Sylvia melanocephala

Upupa epops

Spain

Alauda arvensis

Alectoris rufa

Athene noctua

Calandrella brachydactyla

Carduelis carduelis

Cisticola juncidis

Corvus monedula

Coturnix coturnix

Emberiza calandra

Falco tinnunculus

Galerida cristata

Hirundo rustica

Linaria cannabina

Melanocorypha calandra

Merops apiaster

Oenanthe hispanica

Passer domesticus

Passer montanus

Pica pica

Pterocles orientalis

Streptopelia turtur

Sturnus unicolor

Tetrax tetrax

Upupa epops

France

Alauda arvensis

Alectoris rufa

Anthus campestris

Anthus pratensis

Buteo buteo

Corvus frugilegus

Coturnix coturnix

Emberiza cirlus

Emberiza citrinella

Emberiza hortulana

Falco tinnunculus

Galerida cristata

Lanius collurio

Linaria cannabina

Lullula arborea

Melanocorypha calandra

Motacilla flava

Oenanthe oenanthe

Perdix perdix

Saxicola torquatus

Saxicola rubetra

Sylvia communis

Upupa epops

Vanellus vanellus

Croatia

Alauda arvensis

Anthus campestris

Anthus trivialis

Carduelis carduelis

Coturnix coturnix

Emberiza cirlus

Emberiza citrinella

Emberiza melanocephala

Falco tinnunculus

Galerida cristata

Jynx torquilla

Lanius collurio

Lanius senator

Linaria cannabina

Lullula arborea

Luscinia megarhynchos

Miliaria calandra

Motacilla flava

Oenanthe hispanica

Oriolus oriolus

Passer montanus

Pica pica

Saxicola rubetra

Saxicola torquatus

Streptopelia turtur

Sylvia communis

Upupa epops

Vanellus vanellus

Italy

Alauda arvensis

Anthus campestris

Calandrella brachydactyla

Carduelis carduelis

Carduelis chloris

Corvus cornix

Emberiza calandra

Emberiza hortulana

Falco tinnunculus

Galerida cristata

Hirundo rustica

Jynx torquilla

Lanius collurio

Luscinia megarhynchos

Melanocorypha calandra

Motacilla alba

Motacilla flava

Oriolus oriolus

Passer domesticus italiae

Passer hispaniolensis

Passer montanus

Pica pica

Saxicola torquatus

Serinus serinus

Streptopelia turtur

Sturnus unicolor

Sturnus vulgaris

Upupa epops

Cyprus

Alectoris chukar

Athene noctua

Carduelis carduelis

Cisticola juncidis

Clamator glandarius

Columba palumbus

Coracias garrulus

Corvus corone cornix

Coturnix coturnix

Emberiza calandra

Emberiza melanocephala

Falco tinnunculus

Francolinus francolinus

Galerida cristata

Hirundo rustica

Chloris chloris

Iduna pallida

Linaria cannabina

Oenanthe cypriaca

Parus major

Passer hispaniolensis

Pica pica

Streptopelia turtur

Sylvia conspicillata

Sylvia melanocephala

Latvia

Acrocephalus palustris

Alauda arvensis

Anthus pratensis

Carduelis carduelis

Carpodacus erythrinus

Ciconia ciconia

Crex crex

Emberiza citrinella

Lanius collurio

Locustella naevia

Motacilla flava

Passer montanus

Saxicola rubetra

Sturnus vulgaris

Sylvia communis

Vanellus vanellus

Lithuania

Alauda arvensis

Anthus pratensis

Carduelis carduelis

Ciconia ciconia

Crex crex

Emberiza citrinella

Hirundo rustica

Lanius collurio

Motacilla flava

Passer montanus

Saxicola rubetra

Sturnus vulgaris

Sylvia communis

Vanellus vanellus

Luxembourg

Alauda arvensis

Emberiza citrinella

Lanius collurio

Linaria cannabina

Passer montanus

Saxicola torquatus

Sylvia communis

Hungary

Alauda arvensis

Anthus campestris

Coturnix coturnix

Emberiza calandra

Falco tinnunculus

Galerida cristata

Lanius collurio

Lanius minor

Locustella naevia

Merops apiaster

Motacilla flava

Perdix perdix

Sturnus vulgaris

Sylvia communis

Sylvia nisoria

Vanellus vanellus

Malta

Calandrella brachydactyla

Linaria cannabina

Cettia cetti

Cisticola juncidis

Coturnix coturnix

Emberiza calandra

Lanius senator

Monticola solitarius

Passer hispaniolensis

Passer montanus

Serinus serinus

Streptopelia decaocto

Streptopelia turtur

Sturnus vulgaris

Sylvia conspicillata

Sylvia melanocephala

Netherlands

Alauda arvensis

Anthus pratensis

Athene noctua

Calidris pugnax

Carduelis carduelis

Corvus frugilegus

Coturnix coturnix

Emberiza citrinella

Falco tinnunculus

Gallinago gallinago

Haematopus ostralegus

Hippolais icterina

Hirundo rustica

Limosa limosa

Miliaria calandra

Motacilla fl ava

Numenius arquata

Passer montanus

Perdix perdix

Saxicola torquatus

Spatula clypeata

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Tringa totanus

Turdus viscivorus

Vanellus vanellus

Austria

Acrocephalus palustris

Alauda arvensis

Anthus spinoletta

Anthus trivialis

Carduelis carduelis

Emberiza citrinella

Falco tinnunculus

Jynx torquilla

Lanius collurio

Linaria cannabina

Lullula arborea

Miliaria calandra

Oenanthe oenanthe

Passer montanus

Perdix perdix

Saxicola rubetra

Saxicola torquatus

Serinus citrinella

Serinus serinus

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Turdus pilaris

Vanellus vanellus

Poland

Alauda arvensis

Anthus pratensis

Ciconia ciconia

Emberiza citrinella

Emberiza hortulana

Falco tinnunculus

Galerida cristata

Hirundo rustica

Lanius collurio

Limosa limosa

Linaria cannabina

Miliaria calandra

Motacilla flava

Passer montanus

Saxicola torquatus

Saxicola rubetra

Serinus serinus

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Upupa epops

Vanellus vanellus

Portugal

Athene noctua

Bubulcus ibis

Carduelis carduelis

Chloris chloris

Ciconia ciconia

Cisticola juncidis

Coturnix coturnix

Delichon urbicum

Emberiza cirlus

Falco tinnunculus

Galerida cristata

Hirundo rustica

Lanius meridionalis

Linaria cannabina

Merops apiaster

Miliaria calandra

Milvus migrans

Passer domesticus

Pica pica

Saxicola torquatus

Serinus serinus

Sturnus unicolor

Upupa epops

Romania

Alauda arvensis

Anthus campestris

Calandrella brachydactyla

Ciconia ciconia

Corvus frugilegus

Emberiza calandra

Emberiza citrinella

Emberiza hortulana

Emberiza melanocephala

Falco tinnunculus

Galerida cristata

Hirundo rustica

Lanius collurio

Lanius minor

Linaria cannabina

Melanocorypha calandra

Motacilla flava

Passer montanus

Perdix perdix

Saxicola rubetra

Saxicola torquatus

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Upupa epops

Vanellus vanellus

Slovenia

Acrocephalus palustris

Alauda arvensis

Anthus trivialis

Carduelis carduelis

Columba oenas

Columba palumbus

Emberiza calandra

Emberiza cirlus

Emberiza citrinella

Falco tinnunculus

Galerida cristata

Hirundo rustica

Jynx torquilla

Lanius collurio

Linaria cannabina

Lullula arborea

Luscinia megarhynchos

Motacilla flava

Passer montanus

Phoenicurus phoenicurus

Picus viridis

Saxicola rubetra

Saxicola torquatus

Serinus serinus

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Upupa epops

Vanellus vanellus

Slovakia

Alauda arvensis

Carduelis carduelis

Emberiza calandra

Emberiza citrinella

Falco tinnunculus

Hirundo rustica

Chloris chloris

Lanius collurio

Linaria cannabina

Locustella naevia

Motacilla flava

Passer montanus

Saxicola rubetra

Saxicola torquatus

Serinus serinus

Streptopelia turtur

Sturnus vulgaris

Sylvia communis

Sylvia nisoria

Vanellus vanellus

Finland

Alauda arvensis

Anthus pratensis

Corvus monedula

Crex crex

Delichon urbica

Emberiza hortulana

Hirundo rustica

Numenius arquata

Passer montanus

Saxicola rubertra

Sturnus vulgaris

Sylvia communis

Turdus pilaris

Vanellus vanellus

Sweden

Alauda arvensis

Anthus pratensis

Corvus frugilegus

Emberiza citrinella

Emberiza hortulana

Falco tinnunculus

Hirundo rustica

Lanius collurio

Linaria cannabina

Motacilla flava

Passer montanus

Saxicola rubetra

Sturnus vulgaris

Sylvia communis

Vanellus vanellus

ANNEX VI

LIST OF BIODIVERSITY INDICATORS FOR FOREST ECOSYSTEMS REFERRED TO IN ARTICLE 12(2) AND 12(3)

Indicator	**Description, units, and methodology for determining and monitoring the indicator**
Standing deadwood	**Description:** This indicator shows the amount of non-living standing woody biomass in forest and other wooded land. **Unit:** m^3/ha. **Methodology:** as developed and used by FOREST EUROPE, *State of Europe's Forests 2020,* FOREST EUROPE 2020*,* and in the description of national forest inventories in *Tomppo E. et al.,* National Forest Inventories, *Pathways for Common Reporting,* Springer, 2010, and taking into account the methodology as set out in Annex V to Regulation (EU) 2018/1999 in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
Lying deadwood	**Description:** This indicator shows the amount of non-living woody biomass lying on the ground in forest and other wooded land. **Unit:** m^3/ha. **Methodology:** as developed and used by FOREST EUROPE, *State of Europe's Forests 2020,* FOREST EUROPE 2020*,* and in the description of national forest inventories in *Tomppo E. et al.,* National Forest Inventories, *Pathways for Common Reporting,* Springer, 2010, and taking into account the methodology as set out in Annex V to Regulation (EU) 2018/1999 in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

Indicator	Description, units, and methodology for determining and monitoring the indicator
Share of forests with uneven-aged structure	**Description:** This indicator refers to the share of forests available for wood supply (FAWS) with uneven-aged structure in forests as compared to even-aged structure in forests. **Unit:** Percent of FAWS with uneven-aged structure. **Methodology:** as developed and used by FOREST EUROPE, *State of Europe's Forests 2020,* FOREST EUROPE 2020*,* and in the description of national forest inventories in *Tomppo E. et al.,* National Forest Inventories, *Pathways for Common Reporting,* Springer, 2010.
Forest connectivity	**Description:** Forest connectivity is the degree of compactness of forest covered areas. It is defined in the range of 0 to 100. **Unit:** Index. **Methodology:** as developed by FAO, Vogt P., et al., *FAO – State of the World's Forests: Forest Fragmentation*, JRC Technical Report, Publications Office of the European Union, Luxembourg, 2019.
Common forest birds index	**Description:** The forest bird indicator describes trends in the abundance of common forest birds across their European ranges over time. It is a composite index created from observational data of bird species characteristic for forest habitats in Europe. The index is based on a specific list of species in each Member State. **Unit:** Index. **Methodology:** Brlík et al. *Long-term and large-scale multispecies dataset tracking population changes of common European breeding birds*, Sci Data 8, 21. 2021.

Indicator	Description, units, and methodology for determining and monitoring the indicator
Stock of organic carbon	**Description:** This indicator describes the stock of organic carbon in the litter and in the mineral soil at a depth of 0 to 30 cm in forest ecosystems. **Unit:** Tonnes organic carbon/ha. **Methodology:** as set out in Annex V to Regulation (EU) 2018/1999 in accordance with the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, and as supported by the Land Use and Coverage Area frame Survey (LUCAS) Soil, Jones A. et al., *LUCAS Soil 2022,* JRC technical report, Publications Office of the European Union, 2021.
Share of forest dominated by native tree species	**Description:** Share of forest and other wooded land dominated by (>50 % coverage) native tree species. **Unit:** Percent. **Methodology:** as developed and used by FOREST EUROPE, *State of Europe's Forests 2020,* FOREST EUROPE 2020, and in the description of national forest inventories in *Tomppo E. et al.,* National Forest Inventories, *Pathways for Common Reporting,* Springer, 2010.

Indicator	Description, units, and methodology for determining and monitoring the indicator
Tree species diversity	**Description:** This indicator describes the mean number of tree species occurring in forest areas. **Unit:** Index. **Methodology:** Based on FOREST EUROPE, *State of Europe's Forests 2020,* FOREST EUROPE 2020, and in the description of national forest inventories in *Tomppo E. et al.,* National Forest Inventories, *Pathways for Common Reporting,* Springer, 2010.

ANNEX VII

LIST OF EXAMPLES OF RESTORATION MEASURES REFERRED TO IN ARTICLE 14(16)

(1) Restore wetlands, by rewetting drained peatlands, removing peatland drainage structures or de-poldering and discontinuing peat excavation.

(2) Improve hydrological conditions by increasing quantity, quality and dynamics of surface waters and groundwater levels for natural and semi-natural ecosystems.

(3) Remove unwanted scrub encroachment or non-native plantations on grasslands, wetlands, forests and sparsely vegetated land.

(4) Apply paludiculture.

(5) Re-establish the meandering of rivers and reconnect artificially cut meanders or oxbow lakes.

(6) Remove longitudinal and lateral barriers,such as dikes and dams; give more space to river dynamics and restore free-flowing river stretches.

(7) Re-naturalise riverbeds and lakes and lowland watercourses by, for example. removing artificial bed fixation, optimising substrate composition, improving or developing habitat cover.

(8) Restore natural sedimentation processes.

(9) Establish riparian buffers, such as riparian forests, buffer strips, meadows or pastures.

(10) Increase ecological features in forests, such as large, old and dying trees (habitat trees) and amounts of lying and standing deadwood.

(11) Work towards a diversified forest structure in terms of, for example, species composition and age, enable natural regeneration and succession of tree species.

(12) Assist migration of provenances and species where it may be needed due to climate change.

(13) Enhance forest diversity by restoring mosaics of non-forest habitats such as open patches of grassland or heathland, ponds or rocky areas.

(14) Make use of ‘close-to-nature’ or ‘continuous cover’ forestry approaches; introduce native tree species.

(15) Enhance the development of old-growth native forests and mature stands, for example, by abandonment of harvesting or by active management which favours development of autoregulatory functions and appropriate resilience.

(16) Introduce high-diversity landscape features in arable land and intensively used grassland, such as buffer strips, field margins with native flowers, hedgerows, trees, small forests, terrace walls, ponds, habitat corridors and stepping stones, etc.

(17) Increase the agricultural area subject to agro-ecological management approaches such as organic agriculture or agro-forestry, multicropping and crop rotation, integrated pest and nutrient management.

(18) Reduce grazing intensity or mowing regimes on grasslands where relevant and re-establish extensive grazing with domestic livestock and extensive mowing regimes where they were abandoned.

(19) Stop or reduce the use of chemical pesticides as well as chemical and animal manure fertilisers.

(20) Stop ploughing grassland and introducing seeds of productive grasses.

(21) Remove plantations on former dynamic inland dune systems to re-enable natural wind dynamics in favour of open habitats.

(22) Improve connectivity across habitats to enable the development of populations of species, and to allow for sufficient individual or genetic exchange as well as for species' migration and adaptation to climate change.

(23) Allow ecosystems to develop their own natural dynamics for example by abandoning harvesting and promoting naturalness and wilderness.

(24) Remove and control invasive alien species, and prevent or minimise new introductions.

(25) Minimise negative impacts of fishing activities on the marine ecosystem, for example by using gear with less impact on seabed.

(26) Restore important fish spawning and nursery areas.

(27) Provide structures or substrates to encourage the return of marine life in support of the restoration of coral, oyster or boulder reefs.

(28) Restore seagrass meadows and kelp forests by actively stabilising the sea bottom, reducing and, where possible, eliminating pressures or by active propagation and planting.

(29) Restore or improve the state of characteristic native species population vital to the ecology of marine habitats by conducting passive or active restoration measures, for example, introducing juveniles.

(30) Reduce various forms of marine pollution, such as nutrient loading, noise pollution and plastic waste.

(31) Increase urban green spaces with ecological features, such as parks, trees and woodland patches, green roofs, wildflower grasslands, gardens, city horticulture, tree-lined streets, urban meadows and hedges, ponds and watercourses, taking into consideration, inter alia, species diversity, native species, local conditions and resilience to climate change.

(32) Stop, reduce or remediate pollution from pharmaceuticals, hazardous chemicals, urban and industrial wastewater, and other waste including litter and plastics as well as light in all ecosystems.

(33) Convert brownfield sites, former industrial areas and quarries into natural sites.