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Training module

**HOW TO HANDLE COURT PROCEEDINGS INVOKING NON-COMPLIANCE
WITH EU NATURE PROTECTION LAW
FOCUS ON SITE PROTECTION**

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Introduction to EU Nature Law

Biodiversity, economic, health and scientific impacts on natural capital; EU nature law instruments and how they complement each other

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Topics

- Key terms and concepts
- Need for species and habitats protection
- Health and social benefits of nature
- Economic relevance of ecosystems and biodiversity
- EU Biodiversity Strategy
- Roadmap to a Resource Efficient Europe
- Seventh Environment Action Programme
- Similar Goals in EU Biodiversity Strategy, Roadmap and Seventh Environment Action Programme
- Progress of the EU Biodiversity Strategy
- International nature conventions and strategic plan for biodiversity
- Birds and Habitats Directive and other EU nature law instruments
- Attitudes of Europeans to biodiversity



Key terms and concepts

- Ecosystem

- 'dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit'

Joint Nature Conservation Council

- Non-living environment is composed of land (including soil, rock and minerals), water and air; nutrients in land, water and air; and sunlight
- An ecosystem can be as small as a tree or as large as the Amazon River basin or even the entire earth (Gaia theory)



In order to provide a background for this and other presentations in this module, the following slides define key terms that are frequently used in nature law and policy documents.

The definition of 'ecosystem' shows its distinction from non-living environmental media.

Key terms and concepts

- Biosphere
 - Regions of the surface and atmosphere of the earth where life (living organisms) exists
- Natural capital
 - Various definitions
 - Stock of physical natural assets (including soil, water, air and ecosystems) that provide services that benefit people (including pollinating crops, natural hazard protection, climate regulation or the mental health benefits of a walk in the park)
 - Often defined in economic terms, e.g. natural resources, land and ecosystems in their role of providing inputs and environmental services for economic production
 - World Bank has adopted natural capital accounting



The World Forum on Natural Capital has defined the term ‘natural capital’ as ‘the world’s stocks of natural assets which include geology, soil, air, water and all living things’. The term is frequently used in EU nature documents, in particular, the EU Biodiversity Strategy entitled ‘Our life insurance, our natural capital: an EU biodiversity strategy to 2020’, issued by the European Commission.

Key terms and concepts

- Biodiversity

- Formed of two words: 'biological' and 'diversity'
- 'the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems'

Convention on Biological Diversity, article 2

- That is, organisms and micro-organisms that live on, in and under land, water and air



The word 'biodiversity', which is a contraction of the words 'biological' and 'diversity', began to be widely used in the 1980s. The loss of biodiversity in the EU and globally is a critical concern of the EU.

Key terms and concepts

- Biodiversity (continued)
- Three levels
 - Species diversity: variety of different species of plants, animals, fungi and micro-organisms, e.g., white oak trees (*Quercus alba*), gray wolves (*Canis lupus*), Sockeye salmon (*Oncorhynchus nerka*), humans (*Homo sapiens*)
 - Genetic diversity: variety of genes contained in plants, animals, fungi and micro-organisms; occurs within a species and between species, e.g., sub-species of domestic dog (*Canis lupus familiaris*) includes different breeds, e.g., bulldog, rottweiler, dachshund, poodle, etc.
 - Ecosystem diversity: different natural habitats, e.g., rain forests, coral reefs, deserts, rivers



There are three levels of 'biodiversity'; species diversity, genetic diversity, and ecosystem diversity.

Key terms and concepts

- Examples of species and sub-species: scientific classification (taxonomy) for wolves / dogs
 - Kingdom: Animalia (all animals)
 - Phylum: Chordata (animals with a backbone)
 - Class: Mammalia (all mammals)
 - Order: Carnivora (carnivorous mammals)
 - Family: Canidae (dog-like mammals)
 - Genus: *Canis*
 - Species: *Canis lupus* (gray wolves); *Canis rufus* (red wolves), etc.
 - Sub-species of *Canis lupus*: *Canis lupus nubilus* (Great Plains wolf), *Canis lupus baileyi* (Mexican wolf), *Canis lupus lycaon* (Eastern timber wolf), *Canis lupus familiaris* (domestic dog), etc.



An example of species diversity is shown in the taxonomic ranking for wolves / dogs. Note that domestic dogs are a single sub-species regardless of their many varieties.

Key terms and concepts

- Examples of species and sub-species: scientific classification (taxonomy) for salmon
 - Kingdom: Animalia (all animals)
 - Phylum: Chordata (animals with a backbone)
 - Class: Actinopterygii (ray-finned fishes)
 - Order: Salmoniformes
 - Family: Salmonidae
 - Genus: *Oncorhynchus* (Pacific salmon), *Salmo* (Atlantic salmon)
 - Species: *Oncorhynchus nerka* (Sockeye salmon), *Oncorhynchus tshawytscha* (Chinook salmon), *Salmo salar* (Atlantic salmon), etc.
 - Sub-species: *Oncorhynchus masou masou*, *Salmo salar sebago*, etc.



Another example of species diversity is shown in the taxonomic ranking for salmon.

Key terms and concepts

- Examples of species and sub-species: scientific classification (taxonomy) for humans
 - Kingdom: Animalia (all animals)
 - Phylum: Chordata (animals with a backbone)
 - Class: Mammalia (all mammals)
 - Order: Primates
 - Family: Hominidae
 - Genus: *Homo* (also included Neanderthals)
 - Species: *Homo sapiens* (only surviving species in genus *Homo*)



A further example of species diversity is shown in the taxonomic ranking for humans. In contrast to the vast majority of species, there is only one surviving species in the Genus, Hominidae, that is, *Homo sapiens*.

Key terms and concepts

- Nine threat categories of species (International Union for Conservation of Nature (IUCN))
 - Extinct: no doubt that the last individual has died (e.g., Martha, carrier pigeon *Ectopistes migratorius* (1 September 1914 at Cincinnati Zoo))
 - Extinct in the Wild: exists only in breeding grounds, captivity or as a naturalised population outside its native distribution range
 - Regionally Extinct: extinct in an area covered by a red list or book
 - Critically Endangered: an extremely high risk of extinction in the wild
 - Endangered: a very high risk of extinction in the wild
 - Vulnerable: a high risk of extinction in the wild
 - Near Threatened: not presently endangered but could be in near future
 - Least Concern: not included in the above categories
 - Data Deficient: further data needed to assess category
 - Not examined: not evaluated against relevant criteria



A key aim of nature law is the protection of species of plants and animals that are endangered or threatened with extinction. The IUCN has established threat categories for use in its internationally recognised Red List system.

The categories and criteria in the Red List provide a system that can be applied consistently by different people. Their use improves objectivity by: providing users with clear guidance on how to evaluate different factors that affect the risk of extinction; providing a system that facilitates comparisons across widely different taxa; and providing a better understanding of the methodology for classifying individual species.

Key terms and concepts

- Habitat

- Also called a biome
- Types of environment in which animals, plants and other organisms and micro-organisms live
- Examples of habitat types
 - Terrestrial habitats: rain forests, grasslands, tundra
 - Freshwater habitats: rivers and streams, bogs, wetlands
 - Marine habitats: estuaries, coral reefs
- Natural habitat
 - A habitat that occurs naturally
- Other types of habitats
 - Semi-natural, man-made



There are different types of habitats / biomes, including terrestrial, freshwater and marine habitats. Some of these habitats are natural, others are semi-natural, and others are man-made. For example, an abandoned oil rig may attract many species that live on and around it, creating a marine man-made habitat. Urban foxes are now widely found across the EU, having changed some of their behaviour from that in their natural habitat to their new man-made habitat.

Key terms and concepts

- Natural range of a species
 - Geographic area in which a species lives or migrates
 - Varies widely depending on the species
 - Examples
 - Wolves - wide-ranging
 - Salmon - migratory
 - Some types of butterflies - limited to very small areas



There are wide variances in the natural ranges of different species. Some species, such as some types of butterflies have a very small natural range. The fragmentation of this habitat endangers the continued survival of populations of them or even an entire species or sub-species.

Other species, such as wolves, have a wide-ranging habitat. This means that it is impossible to confine them to a specified area such as a national park unless barriers are constructed to prevent them leaving it – which is generally not possible.

Populations of migratory species, such as salmon, can become endangered if a vital part of their habitat, such as the spawning area of their birth river, is destroyed.

Note that, in contrast to other species, the natural range of people is virtually world-wide from the equator to the Antarctic.

Key terms and concepts

- Natural range of a habitat
 - Geographic area of the habitat
 - Varies widely depending on the type of habitat
 - May be radically reduced by human activities as well as natural events
 - Examples, construction of towns and infrastructure, agriculture



Natural ranges of habitats may be reduced by natural and man-made events. Fragmentation of natural habitats into 'patches' is a major cause of the loss of biodiversity because populations of a species or sub-species can be confined to a single patch that is not sufficiently large or diverse for them to survive.

Key terms and concepts

- ‘Among the new paradigms in ecology, none is more revolutionary than the idea that nature is not delicately balanced in equilibrium, but rather is dynamic, often unpredictable, and perhaps even chaotic’

Reed F. Noss, ‘Some Principles of Conservation Biology as They Apply to Environmental Law’, 69 Chicago-Kent Law Review 893 (1994)

- Natural range of a species or habitat is ‘roughly the spatial limits within which [it] occurs’; it ‘is not static but dynamic: it can decrease and expand’

European Commission, Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC (February 2007)



Until the late 1960's, nature was generally considered to be in equilibrium. The realisation that nature was dynamic resulted in a paradigm shift from conventional environmental management to adaptive management that recognises that populations of species can drastically fluctuate in number and extent of their range over time. This includes sudden as well as gradual fluctuations.

Key terms and concepts

- 'Conservation status' of a species
 - 'the sum of the influences acting on the species concerned that may affect the long-term distribution and abundance of its populations within the [EU]'
- Conservation status is 'favourable' when
 - 'population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats, and
the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future, and
there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis'

Habitats Directive, article 1



The concept of 'favourable conservation status' of species and natural habitats is the basis for the Birds and Habitats Directives. The Directives aim to maintain or restore the favourable conservation status of species protected by them.

Key terms and concepts

- 'Conservation status' of a natural habitat
 - 'the sum of the influences acting on a natural habitat and its typical species that may affect its long-term natural distribution, structure and functions as well as the long-term survival of its typical species within [the EU]'
- Conservation status is 'favourable' when
 - 'its natural range and areas it covers within that range are stable or increasing, and
the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and
the conservation status of its typical species is favourable as defined [above]'

Habitats Directive, article 1



As with the favourable conservation status of a species, the Habitats Directive aims to maintain or restore the favourable conservation status of natural habitats listed in its annexes. Both the Habitats and Birds Directives aim to maintain or restore the natural habitats of species protected by them as well as the species themselves.

Need for species and habitats protection

- Scientists have warned that loss of biodiversity at the current rate means that a massive change to the global biosphere is not only 'highly plausible', it may already be occurring
 - Global ecosystem is approaching a planetary-scale tipping point (a threshold-induced shift from one state to another) due to incremental changes caused by human activities
 - Human population growth has resulted in increased consumption of natural resources
 - Habitats have been transformed and fragmented
 - Production and consumption of energy has resulted, among other things, in climate change
 - If the threshold-induced shift is reached, a return to a previous state will be 'extremely difficult or even impossible'



There is an increasing number of scientific articles that have concluded that the Holocene Epoch, which began after the last ice age some 11,700 years ago, has ended and that the earth has entered a new geologic era called the Anthropocene. The word 'anthropocene' is derived from the ancient Greek word 'anthropos' meaning 'human'.

Need for species and habitats protection

- Warnings by scientists (continued)
 - '[All the forcing mechanisms from the incremental changes] far exceed, in both rate and magnitude, [those] evident at the most recent global-scale state shift, the last glacial-interglacial transition'
 - Occurred between 14,300 and 11,000 years ago; most pronounced biotic changes occurred between 12,900 and 11,300 years ago
 - Examples of direct forcing mechanisms include
 - 'conversion of ~43% of Earth's land to agricultural or urban landscapes, with much of the remaining natural landscapes networked with roads'
 - Change 'exceeds the physical transformation that occurred at the last [glacial-interglacial] transition, when ~30% of Earth's surface went from being covered by glacial ice to being ice free'



Many scientists writing on the Anthropocene not only contend that the earth has entered this geologic era but that the effects of people on the earth are changing nature itself. A growing number of scientists argue that these changes to nature could result in the sixth mass extinction.

For example, Reed F. Noss, a renowned and influential professor of conservation biology, noted in an article entitled 'Some Suggestions for Keeping Wildlife Refuges Healthy and Whole', 44 Natural Resources Journal 1093, 1100 (2004), that 'almost all biologists agree that we are well into the sixth mass extinction event in the history of life, with the current extinction rate vastly surpassing the rate of speciation'.

Need for species and habitats protection

- Warnings by scientists (continued)
 - Last glacial-interglacial transition included
 - ‘extinction of about half of the species of large-bodied mammals, several species of large birds and reptiles, and a few species of small animals ... and a global increase in human biomass and spread of humans to all continents’
 - If tipping point is reached, plant species could not migrate fast enough from some locations to survive

Anthony D. Barnosky et al ‘Approaching a State-Shift in Earth’s Biosphere’,
486 Nature 52 (7 June 2012)



Need for species and habitats protection

- Big five mass extinctions
 - 439 million years ago - 86% of species lost
 - 364 million years ago - 75% of species lost
 - 251 million years ago, 96% of species lost
 - between 199 million and 214 million years ago - 70-75% of species lost
 - 65 million years ago - 76% of species lost
 - Dinosaurs became extinct
 - (Kingdom - Animalia; Phylum - Chordata; Class - Dinosauria)
- Are we in the sixth mass extinction?



Need for species and habitats protection

- Scientists recently researched populations of nearly half of the known species of terrestrial vertebrates (27,600 species) between 1900 and 2015
 - Found that 32% had decreased in population size and range
- More detailed research of 177 mammal species indicated that
 - All had lost at least 30% of their geographic ranges
 - Over 40% had experienced population declines of at least 80%



Recent research by a group of influential biologists suggests that reductions in the size of populations of species and the number of species threatens their extinction and that a mass extinction event may be taking place that will threaten the survival of civilisation.

Need for species and habitats protection

- Scientists concluded that

‘Earth is experiencing a huge episode of population declines and extirpations, which will have negative cascading consequences on ecosystem functioning and services vital to sustaining civilization’

- Described ongoing sixth mass extinction event as ‘biological annihilation’

Gerardo Ceballos, Paul R. Ehrlich and Rodolfo Dirzo, ‘Biological annihilation via the ongoing sixth mass extinction signaled by vertebrate population losses and declines’,
Proceedings of the National Academy of Sciences (published online 20 July 2017)



Need for species and habitats protection

- Recognition of the loss of biodiversity is not new
 - “The worst thing that can happen - will happen [in the 1980s] - is not energy depletion, economic collapse, limited nuclear war, or conquest by a totalitarian government. As terrible as these catastrophes would be for us, they can be repaired within a few generations. The one process ongoing in the 1980s that will take millions of years to correct is the loss of genetic and species diversity by the destruction of natural habitats. This is the folly our descendants are least likely to forgive us”

Paul and Anne Ehrlich, *Extinction; The Causes and Consequences of the Disappearance of Species* (Random House, 1981) (quoting E.O. Wilson, *Harvard Magazine* (January-February 1980))

- Book is dedicated to ‘Homo sapiens, which through the extinction of others endangers itself’



Need for species and habitats protection

- Chronic harm to natural resources from human activities
 - Land use change resulting in
 - Loss of biodiversity
 - Degradation and destruction of natural resources
 - Habitat fragmentation
 - Competition from invasive alien species
 - Damage to aquatic ecosystems
 - Over-exploitation of, and increasing demands on, natural resources
 - Collapse of critical ecosystems
 - Depletion of fish stocks
 - Vulnerability of coastal environments to extreme weather events



The main reasons for the gradual loss of natural resources from human activities are listed in this slide.

Habitat fragmentation is the umbrella term for the loss of habitat resulting from the division of large, contiguous habitats into a number of smaller patches that are isolated from each other. Populations of species are less able to survive in the patches than in the un-fragmented habitat.

Need for species and habitats protection

- Chronic harm to natural resources from human activities (continued)
 - Pollution of the atmosphere
 - Impacts of use of chemicals and synthetic products
 - Waste generation
 - Climate change



The threat of climate change is closely linked to the threat caused by the loss of biodiversity. The European Commission regards both as the 'most critical global environmental threat', as stated in its Communication entitled 'Our life insurance, our natural capital: an EU biodiversity strategy to 2020 (COM(2011) 244 final, 3 May 2011).

Need for species and habitats protection

- Effects of climate change

- 'You can't negotiate with a beetle. You are now dealing with natural law. And if you don't understand natural law, you will soon.'

Lecture by Oren Lyons, member of the Onondaga Nation Council of Chiefs of the Six Nations of the Iroquois Confederacy, former Professor of American Studies at the State University of New York at Buffalo, referring to four million acres of spruce trees across Alaska being destroyed by beetles because rising winter temperatures caused by climate change had resulted in their northwards migration

Quoted by Mary Christina Wood, "You Can't Negotiate with a Beetle": Environmental Law for a New Ecological Age', 50 Natural Resources Journal 167 (2010)



Oren Lyons, Chief and Faithkeeper of the Turtle Clan of the Onondaga Nation, is a world recognised advocate and scholar on indigenous peoples and environmentalism.

Need for species and habitats protection

- ‘The thing that you have to understand about nature and natural law is, there’s no mercy. . . . There’s only law. And if you don’t understand that law and you don’t abide by that law, you will suffer the consequence. Whether you agree with it, understand it, comprehend it, it doesn’t make any difference. You’re going to suffer the consequence, and that’s right where we’re headed right now’

Oren Lyons, quoted by Mary Christina Wood, ‘“You Can’t Negotiate with a Beetle”: Environmental Law for a New Ecological Age’, 50 Natural Resources Journal 167 (2010)



Need for species and habitats protection

- Discrete and episodic harm to natural resources from human activities
 - 1967: *Torrey Canyon* oil spill (Lands End, England)
 - 1969: oil spill from blow out at offshore drilling platform (Santa Barbara, California, USA)
 - 1969: Cuyahoga River fire (Cincinnati, Ohio, USA)
 - 1976: dioxin poisoning from explosion at chemical plant (Seveso, Italy)
 - 1978: *Amoco Cadiz* oil spill (Brittany, France)
 - 1984: toxic gas cloud from escape of methyl isocyanate (Bhopal, India)



Sudden releases of oil and other pollutants into the environment have become a common phenomenon across the world. Marine releases include not only oil spills from vessels but also the release of oil into the Gulf of Mexico from a blow out that lasted 89 days and resulted in approximately five million barrels of oil being released into the Gulf. Some releases have injured and killed people as well as animals and plants. They include deaths from the explosion on the Deepwater Horizon, the sudden release of methyl isocyanate at Bhopal, India, and the sudden release of toxic mud from failed dam at alumina factory at Kolontár, Hungary, that destroyed villages in its path.

Need for species and habitats protection

- Discrete and episodic harm to natural resources from human activities (continued)
 - 1993: *Braer* oil spill (Shetland Islands, Scotland)
 - 1999: *Erika* oil spill (Brittany, France)
 - 2000: cyanide release from dam at a gold mine (Baia Mare, Romania)
 - 2002: *Prestige* oil spill (Galicia, Spain)
 - 2010: *Deepwater Horizon* (Gulf of Mexico, United States)
 - 2010: toxic mud from failed dam at alumina factory (Kolontár, Hungary)
 - 2011: release of toxins following fire and explosions at Chemie-Pack facility (Moerdijk, Netherlands)
 - 2014: lead poisoning of domestic water supply at Flint, Michigan



Need for species and habitats protection

- Loss of biodiversity

‘[M]any environmental trends in the Union continue to be a cause for concern, not least due to insufficient implementation of existing Union environment legislation. Only 17% of species and habitats assessed under the Habitats Directive have favourable conservation status, and the *degradation and loss of natural capital is jeopardising efforts to attain the Union’s biodiversity and climate change objectives*. Such status of species and habitats as well as the *degradation and loss of natural capital* have high associated costs which *have not yet been properly valued in our economic or social system*. 30% of the Union’s territory is highly fragmented, affecting the connectivity and health of ecosystems and their ability to provide services as well as viable habitats for species. ...’

Seventh EU Environment Action Programme; Living Well Within the Limits of our Planet (2013), annex, para 6 (emphasis added)



The European Commission adopted a Communication on an EU biodiversity strategy in February 1998 with the aim ‘to anticipate, prevent and attack the causes of significant reduction or loss of biological diversity at the source’ in order to halt the loss of biodiversity and to lead to the maintenance or restoration of species and ecosystems in a favourable conservation state. Since that time, the EU has emphasised the need to halt the loss of biodiversity in various programmes, policies and strategies. These include measures to conserve biodiversity in the EU sustainable development strategy that was adopted by the European Council in 2001. The programmes, policies and strategies emphasise, among other things, the effect of the modification of natural habitats on the loss of biodiversity.

A key component of the strategy to halt the loss of biodiversity is the protection of designated areas under the Natura 2000 network, as will be discussed later.

Need for species and habitats protection

- Loss of biodiversity (continued)

‘two most frequently reported pressures and threats for species are associated with modification of natural conditions (mostly changes to hydrology [especially wetlands]) and agriculture, followed by natural processes.

“Modification of natural conditions”, for example, is credited with over two-thirds of the reported pressures on fish, a third of the pressure on molluscs and a quarter of the pressure on amphibians. Pressures due to agriculture include both intensification and abandonment.



Need for species and habitats protection

- Loss of biodiversity (continued)

‘[M]ost frequently reported pressures and threats for terrestrial ecosystems are associated with agriculture and changes to hydrology. For freshwater ecosystems, changes in hydrology are most frequently reported as being important, although “loss of habitat features or prey availability” is frequently reported for species, as is “pollution to surface waters” for habitats’



Need for species and habitats protection

- Loss of biodiversity (continued)

‘pressures and threats most frequently reported as important for marine ecosystems are fishing, particularly for species, followed by “modification of natural conditions” (particularly for habitats) and “pollution”.

The two most commonly reported conservation measures are those to “establish protected areas/sites” and for “legal protection of habitats and species”

European Environment Agency, State of nature in the EU: Results from reporting under the nature directives 2007-2012 (EEA Technical Report No 2/2015)



The most recent European Environment Agency report on the State of Nature in the EU, published in 2015, contains comprehensive facts and figures on the status and trends of species and habitats covered by the Birds and Habitats Directives. The report was compiled from reports submitted by Member States to the European Commission in 2013 under those Directives and subsequent assessments at EU geographical and biogeographical levels. The reports submitted by Member States to the Commission in 2013 included information derived between 2007 and 2012.

Health and social benefits of nature

- Institute for European Environmental Policy, The Health and Social Benefits of Nature and Biodiversity Protection (final report, 28 April 2016) (funded by the European Commission, DG Environment (ENV.B.3/ETU/2014/0039))
 - Indicated the following health and social benefits of nature



The European Commission commissioned a report by the Institute for European Environmental Policy to fill a gap in then-existing studies of a comprehensive assessment of public health benefits from improved air quality, climate, exercise and healthier lifestyles and/or social benefits from access to nature and working with nature. The report explored and assessed these benefits, focusing in particular on the Natura 2000 network as well as green infrastructure outside the network.

The report discusses opportunities for further developing and increasing health and social benefits from nature. In addition, it identifies tools that can be used to map social values and health benefits linked to nature and makes recommendations for promoting these linkages at EU level.

Health and social benefits of nature

- Direct benefits
 - Improved air quality
 - Mitigation of urban heat stress and noise
 - Presence of nature in everyday living environments
- Indirect benefits
 - Recreation and exercise leading to better health
 - Wellbeing and living in an attractive location
- Social benefits
 - Access to nature
- Wider socio-economic benefits
 - Opportunities for volunteering, skill building and employment



Health and social benefits of nature

- Direct benefits

- Improved air quality: over 400,000 cases of early mortality in the EU-28 from air pollution in 2012
- Heat stress: 70,000 additional deaths in Europe caused by 2003 heat wave
- Urban heat island effect: urban areas can be between 2 to 12 degrees warmer than peri-urban, low-density areas with green spaces
- Presence of nature: studies have shown that
 - Pregnant women who live over 300 metres from green space have higher blood pressure than those who live closer
 - Living 2 to 5 km from forests, traditional farms or other natural environments reduces the risk of allergies in children



Health and social benefits of nature

- Indirect health benefits

- Recreation and exercise; study in Denmark showed that people living over 1 km from green space are more likely to be obese and less likely to exercise rigorously than those living closer than 300 metres
- Wellbeing and living in an attractive location: study in Spain showed that people living within 300 metres of green spaces consider they have better physical and mental health



Health and social benefits of nature

- Social benefits

- Access to nature results in children being able to function better, with higher concentration, motor skills, self-esteem and emotional well-being
- Strong evidence that nature has restorative and stress reducing effects



Health and social benefits of nature

- Wider socio-economic benefits
 - Volunteering leads to increased social contact and sense of belonging
 - Forest-related and water-related employment
 - Tourism and recreation employment



Economic relevance of ecosystems and biodiversity

- Millennium Ecosystem Assessment
 - Between 2001 and 2005, 1,360 experts worldwide assessed the consequences of ecosystem change for human well-being
 - Analysed the global economic benefits of biodiversity, the costs of its loss and the failure to take protective measures compared with the costs of effective conservation
 - Introduced the term 'ecosystem services'



In 2000, the then United Nations Secretary-General Kofi Annan called for the preparation of the Millennium Ecosystem Assessment. The Assessment was initiated in 2001 with the objective of assessing the consequences of changes in ecosystems that affect human well-being and the scientific basis for action needed to enhance the conservation and sustainable use of those ecosystems and their contribution to human well-being. The findings of the Assessment are set out in five technical volumes and six synthesis reports. They provide a state-of-the-art scientific appraisal of the condition and trends in the world's ecosystems, services provided by them, and options to restore, conserve or enhance the sustainable use of ecosystems. One of the main findings of the Assessment was that global biodiversity has declined on a massive scale since the 1950s due to more rapid and extensive changes in ecosystems than during any other comparable period in human history.

Economic relevance of ecosystems and biodiversity

- The Economics of Ecosystems and Biodiversity: Mainstreaming the Economics of Nature: A synthesis of the approach, conclusions and recommendations of TEEB (2010)
- Four types of ecosystem services
 - Provisioning services
 - Ecosystems provide goods including crops, livestock, fish and other food, wood and fibre, medicinal resources and fresh water
 - Regulating services
 - Services regulated by ecosystems include floodplains and other ecosystems that regulate flooding; pollinators that regulate plants; peatlands, bogs and forests that regulate climate by acting as carbon sinks; vegetation, forests and wetlands that regulate air quality, water flows and soil erosion



The Economics of Ecosystems and Biodiversity (TEEB) is a global initiative that was established following a meeting of environment ministers of the G8 countries plus Brazil, China, India, Mexico and South Africa at Potsdam, Germany, on 15-17 March 2007. Germany's proposal for the study was endorsed by the G8 and the other five countries on 6-8 June 2007.

The series of reports produced pursuant to the initiative are designed for ecologists and economists, policymakers at international, national, regional and local level, business, and the general public. TEEB focuses on 'making nature's values visible'. Its principal objective is to mainstream the values of biodiversity and ecosystem services into decision-making at all levels. It aims to achieve this goal by means of a structured approach to valuation that helps decision-makers recognise the wide range of benefits provided by ecosystems and biodiversity, demonstrates their values in economic terms and, where appropriate, reflects those values in decision-making. TEEB has also produced a series of country and biome studies.

Economic relevance of ecosystems and biodiversity

- Ecosystem services (continued)
 - Cultural services
 - Non-material benefits derived from ecosystems including aesthetic and landscape values, spiritual values, tourism including ecotourism, and opportunities for outdoor learning and recreation
 - Supporting services
 - Support the other three services including soil formation and nutrient and water recycling



EU Biodiversity Strategy - History

- 1998: Communication from the Commission on a European Community biodiversity strategy
 - Aim: 'to anticipate, prevent and attack the causes of significant reduction or loss of biological diversity at the source' in order to halt biodiversity loss and to ensure that species and ecosystems, including agro-ecosystems, are in a satisfactory conservation state
- 2001: Council adopted the Sustainable Development Strategy
 - Included target of halting the loss of biodiversity in the EU by 2010
- 2001: Commission published four biodiversity action plans to support the EU Biodiversity Strategy
 - Conservation of natural resources; agriculture; fisheries; and integration of biodiversity into policies, programmes and projects implemented through economic and development co-operation



In February 1998, the Commission adopted a Communication on an EU biodiversity strategy. The aim of the strategy was 'to anticipate, prevent and attack the causes of significant reduction or loss of biological diversity at the source' in order to halt biodiversity loss and to ensure that species and ecosystems, including agro-ecosystems, are in a favourable conservation state. A key component of the Communication was the conservation and sustainable use of biodiversity including measures to protect it inside and outside the Natura 2000 network as well as measures to integrate biodiversity concerns into liability mechanisms. Integrating biodiversity measures into agriculture was to be accomplished, in part, through the Common Agricultural Policy.

Article 3 of the sustainable development strategy, which was adopted by the Council in June 2001, states, in pertinent part, that the EU 'shall work for the sustainable development of Europe based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment and social progress, and a high level of protection and improvement of the quality of the environment'.

The biodiversity action plans issued by the Commission apply to areas outside, as well as inside, the Natura 2000 network.

EU Biodiversity Strategy - History

- 2002: Council and European Parliament adopted the Sixth Community Environment Action Programme
 - Also included a target of halting the loss of biodiversity in the EU by 2010
- 2005: Commission submitted a revised Sustainable Development Strategy
 - Reiterated 2010 target for halting the loss of biodiversity in the EU
- 2006: EU Council adopted the Revised Strategy
- 2008: Commission stated that it was 'highly unlikely' that the EU would even come close to meeting the 2010 target unless the EU and Member States made intensive efforts to do so
- March 2010: Council conceded failure to reach the 2010 target



In 2005, in its review of the EU sustainable development strategy, the Commission concluded, among other things, that growing pressure on natural resources and biodiversity was unsustainable, stating that it would carry out a review to reinforce a 'new approach to policy making' as a central means of placing sustainable development at the core of EU policymaking. The strategy also emphasised the need to ensure sufficient EU and Member State funding, management of the Natura 2000 network, and the integration of biodiversity concerns into the EU's internal and external policies.

The Commission further stated that, whilst notable progress had been made and the first signs of slowing rates of loss of biodiversity had begun to appear, the target could only be met if there was accelerated implementation of the Convention of Biological Diversity and the strategy at EU and Member State levels. The Commission reiterated that Member States had the same responsibility to implement the Convention as did the EU, commenting that the Commission's role 'should be to provide a supportive policy framework, provide guidance, facilitate, monitor and enforce where necessary'.

In its Communication entitled Halting the loss of biodiversity by 2010 – and beyond; Sustaining ecosystem services for human well-being (COM(2006) 216 final, 22 May 2006), the Commission noted two factors in particular. First, land use and development, which are controlled at Member State level, were not being reconciled with conserving biodiversity and maintaining services provided by ecosystems. Second, climate change was having an increasing impact on biodiversity.

Reasons given by the European Parliament in its Resolution of 21 September 2010 on the implementation of EU legislation aiming at the conservation of biodiversity (2009/2108(INI)), for the failure to reach the 2010 target included 'the failure to

recognise and deal with the driving forces behind the reduction in biological diversity; incomplete implementation of legislation; incomplete and poor integration into sectoral policies; insufficient scientific knowledge and data gaps; lack of political will; insufficient funding; [and] lack of additional efficiently-targeted instruments to tackle specific problems such as invasive alien species’.

EU Biodiversity Strategy - Current Strategy

- January 2010: Commission submitted a new strategy to halt the loss of biodiversity in the EU
 - Included four options
 1. Significantly reduce the rate of loss of biodiversity and ecosystems in the EU by 2020
 2. Halt the loss of biodiversity and ecosystem services in the EU by 2020
 3. Halt the loss of biodiversity and ecosystem services in the EU by 2020 and restore them as far as possible
 4. Halt the loss of biodiversity and ecosystem services in the EU by 2020, restore them as far as possible, and increase the EU's contribution to avert global biodiversity loss



The Commission concluded in January 2010 that all four of the above options required establishment of a scientific baseline of the state of biodiversity and ecosystem services in the EU. It also considered that 'any new target must factor in the role of ecosystems and ecosystem services'. Further, it recognised the need for a new governance framework to address the main pressures on biodiversity and ecosystem services at four levels: international; EU; national; and sub-national.

EU Biodiversity Strategy - Current Strategy

- March 2010: Council committed the EU to the fourth, most ambitious, option
- May 2011: European Commission published the current EU Biodiversity Strategy entitled 'Our life insurance, our natural capital: an EU biodiversity strategy to 2020'
 - Emphasised importance of further work to implement the no net loss of biodiversity objective and called on the need to integrate the strategy into other project areas including the Common Agriculture Policy
- June 2011: Council endorsed the new EU Biodiversity Strategy



The current EU Biodiversity Strategy is the first EU nature strategy to highlight the value of ecosystem services.

EU Biodiversity Strategy - Current Strategy

- Current EU Biodiversity Strategy

- States, among other things

‘Biodiversity - the extraordinary variety of ecosystems, species and genes that surround us - is our life insurance, giving us food, fresh water and clean air, shelter and medicine, mitigating natural disasters, pests and diseases and contributes to regulating the climate. Biodiversity is also our natural capital, delivering ecosystem services that underpin our economy. Its deterioration and loss jeopardises the provision of these services: we lose species and habitats and the wealth and employment we derive from nature, and endanger our own wellbeing. This makes biodiversity loss the most critical global environmental threat alongside climate change - and the two are inextricably linked’



EU Biodiversity Strategy - Current Strategy

- Current EU Biodiversity Strategy (continued)
 - Six targets for 2020
 1. Fully implement the Birds and Habitats Directives
 2. Maintain and restore ecosystems and their services
 3. Ensure the sustainability of agriculture and forestry
 - a. Increase the contribution of agriculture to maintaining and enhancing biodiversity
 - b. Increase the contribution of forestry to maintaining enhancing biodiversity
 4. Ensure the sustainable use of fisheries resources and achieve good environmental status
 5. Help combat invasive alien species
 6. Help avert global biodiversity loss



EU Biodiversity Strategy - Current Strategy

- Current EU Biodiversity Strategy (continued)
 - 20 actions to meet the six targets
 1. Complete the establishment of the Natura 2000 network and ensure good management
 2. Ensure adequate financing of Natura 2000 sites
 3. Increase stakeholder awareness and involvement and improve enforcement
 4. Improve and streamline monitoring and reporting
 5. Improve knowledge of ecosystems and their services in the EU
 6. Set priorities to restore and promote the use of green infrastructure
 7. Ensure no net loss of biodiversity and ecosystem services



EU Biodiversity Strategy - Current Strategy

- Current EU Biodiversity Strategy (continued)
 - 20 actions to meet the six targets (continued)
 8. Enhance direct payments for environmental public goods in the Common Agricultural Policy
 9. Better target rural development to biodiversity conservation
 10. Conserve Europe's agricultural genetic diversity
 11. Encourage forest holders to protect and enhance forest biodiversity
 12. Integrate biodiversity measures in forest management plans
 13. Improve the management of fished stocks
 14. Eliminate adverse impacts on fish stocks, species, habitats and ecosystems
 15. Strengthen the EU plant and animal health regimes



EU Biodiversity Strategy - Current Strategy

- Current EU Biodiversity Strategy (continued)
 - 20 actions to meet the 6 targets (continued)
 - 16. Establish a dedicated instrument on invasive alien species
 - 17. Reduce indirect drivers of biodiversity loss
 - 18. Mobilise additional resources for global biodiversity conservation
 - 19. 'Biodiversity proof' EU development cooperation
 - 20. Regulate access to genetic resources and the fair and equitable sharing of benefits arising from their use



EU Biodiversity Strategy - Current Strategy

- Current EU Biodiversity Strategy (continued)

- 2050 vision

‘By 2050, European Union biodiversity and the ecosystem services it provides - its natural capital - are protected, valued and appropriately restored for biodiversity’s intrinsic value and for their essential contribution to human wellbeing and economic prosperity; and so that catastrophic changes caused by the loss of biodiversity are avoided’

- 2020 Headline Target

‘Halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss’



Roadmap to a Resource Efficient Europe

- September 2011: Commission submitted the 'Roadmap to a Resource Efficient Europe'
 - Reiterated the target of halting the loss of biodiversity in the EU by 2020
 - Stated that tackling the challenges and changing them into opportunities, including halting the loss of biodiversity, would require the EU economy to undergo 'a fundamental transformation within a generation - in energy, industry, agriculture, fisheries and transport systems, and in producer and consumer behaviour'



In the 'Roadmap to a Resource Efficient Europe', the European Commission commented that the value of biodiversity was only beginning to be taken into account in decision making at the operational level.

Note that whilst the Commission stated that tackling the challenges and changing them into opportunities, including halting the loss of biodiversity, would require the EU economy to undergo 'a fundamental transformation within a generation – in energy, industry, agriculture, fisheries and transport systems, and in producer and consumer behaviour'; many people in the EU do not know the meaning of the term 'loss of biodiversity' or even the term 'biodiversity'.

Roadmap to a Resource Efficient Europe

- Roadmap to a Resource Efficient Europe
 - 2050 Vision
 - By 2050 the EU's economy has grown in a way that respects resource constraints and planetary boundaries, thus contributing to global economic transformation. Our economy is competitive, inclusive and provides a high standard of living with much lower environmental impacts. All resources are sustainably managed, from raw materials to energy, water, air, land and soil. Climate change milestones have been reached, while biodiversity and the ecosystem services it underpins have been protected, valued and substantially restored'



Seventh Environment Action Programme

- Seventh EU Environment Action Programme; Living Well Within the Limits of our Planet (2013)
 - 2014: entered into force (Decision No 1386/2013/EU)
 - Covers period 2014 to 2020
 - Three key objectives
 - To protect, conserve and enhance the Union's natural capital
 - To turn the Union into a resource-efficient, green, and competitive low-carbon economy
 - To safeguard the Union's citizens from environment-related pressures and risks to health and wellbeing



The Seventh Environment Action Programme was adopted by the European Parliament and the Council. The Sixth Environment Action Programme, which ended in July 2012, was the first programme to be adopted by both EU institutions. Whilst the adoption of the Sixth, and now Seventh, Environment Action Programmes by the European Parliament and the Council heightened their legal status, the programmes are still soft law. Member States are not obliged to comply with their provisions.

Seventh Environment Action Programme

- Nine priority objectives

- ‘(a) to protect, conserve and enhance the Union’s natural capital;
- (b) to turn the Union into a resource-efficient, green and competitive low-carbon economy;
- (c) to safeguard the Union’s citizens from environment-related pressures and risks to health and well-being;
- (d) to maximise the benefits of Union environment legislation by improving implementation;
- (e) to improve the knowledge and evidence base for Union environment policy;
- (f) to secure investment for environment and climate policy and address environmental externalities;
- (g) to improve environmental integration and policy coherence;
- (h) to enhance the sustainability of the Union’s cities;
- (i) to increase the Union’s effectiveness in addressing international environmental and climate-related challenges’



Seventh Environment Action Programme

- 2050 Vision

‘In 2050, we live well, within the planet’s ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society’s resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society’



Similar Goals in EU Strategy, Roadmap and Seventh Environment Action Programme

- Halt the loss of biodiversity in the EU by 2020
- 2050 Vision
 - Sustainable management of natural resources
 - Protect, value and substantially restore biodiversity to contribute to human wellbeing and economic prosperity and avoid catastrophic losses



Progress of the EU Biodiversity Strategy

- Report from the Commission, The Mid-Term Review of the EU Biodiversity Strategy to 2020 (COM(2015) 478 final, 2 October 2015)
2020 Headline target
 - No significant progress towards the target
- 1. Fully implement the Birds and Habitats Directives
 - Progress but at insufficient rate
- 2. Maintain and restore ecosystems and their services
 - Progress but at insufficient rate
- 3a. Increase the contribution of agriculture to maintaining and enhancing biodiversity
 - No significant progress towards the target



The Mid-Term Review of the EU Biodiversity Strategy was accompanied by Commission Staff Working Document entitled EU Assessment of Progress in Implementing the EU Biodiversity Strategy to 2020 (SWD(2015) 187 final, 2 October 2015). The Commission Staff Working Document commented, among other things, that the IUCN has reported that 270 species have become extinct since 1800 versus 68 species having become extinct between 1500 and 1800.

Progress of the EU Biodiversity Strategy

- Mid-Term Review (continued)
 - 3b. Increase the contribution of forestry to maintaining enhancing biodiversity
 - No significant progress towards the target
 - 4. Ensure the sustainable use of fisheries resources and achieve good environmental status
 - Progress but at insufficient rate
 - 5. Help combat invasive alien species
 - Currently on track with implementation
 - 6. Help avert global biodiversity loss
 - Progress but at insufficient rate



Progress of the EU Biodiversity Strategy

- Mid-Term Review (continued)

‘2020 biodiversity targets can only be reached if implementation and enforcement efforts become considerably bolder and more ambitious. At the current rate of implementation, biodiversity loss and the degradation of ecosystem services will continue throughout the EU and globally, with significant implications for the capacity of biodiversity to meet human needs in the future’

‘It is now urgent to intensify the implementation of measures across all targets and to ensure that the principles included in the policy frameworks are fully reflected on the ground. ...’



Progress of the EU Biodiversity Strategy

- 2 February 2016: European Parliament Resolution on the mid-term review of the EU's Biodiversity Strategy
 - Called, among other things, 'for the Commission and Member States, as a matter of urgency, to give higher priority to achieving the 2020 targets'



The European Parliament Resolution of 2 February 2016 also called on the European Commission and Member States to adopt 'a multi-stakeholder approach and stressed the vital role of national, regional and local actors, and of their full participation in this process; stresse[d] that funding and greater public awareness and understanding of, and support for, biodiversity protection are also essential; consider[ed] that a good information policy and the early involvement of all actors concerned, including socio-economic actors, is therefore key to achieving these objectives'; and called 'for the EU to reduce its biodiversity footprint worldwide, in line with the principle of Policy Coherence for Development, and to bring it within the ecological limits of ecosystems by making progress in achieving the biodiversity headline targets and fulfilling the commitments on biodiversity protection'. The European Parliament also called on the EU 'to assist developing countries in their efforts to conserve biodiversity and ensure its sustainable use'.

Progress of the EU Biodiversity Strategy

- An EU Action Plan for nature, people and the economy (2017)
 - Will be discussed in the presentation on the Habitats and Birds Directives in light of CJEU case law



International nature conventions and similar instruments

- EU and/or its Member States are parties to various international nature conventions
 - Conventions tend to have similar goals to EU law
 - Implementation of some of the conventions has resulted in adoption of new laws by the EU
 - Areas protected under some conventions are also protected under EU law (and Member State domestic law)



International nature conventions and similar instruments

- UN Convention on Biological Diversity; opened for signature at Rio Earth Summit 1992; 1993 entry into force
 - Council Decision of 25 October 1993 concerning the conclusion of the Convention on Biological Diversity (93/626/EEC)
 - Convention also included a goal to halt the loss of biodiversity by 2010



Member States, as well as the EU, are parties to the Convention on Biological Diversity. Article 26 of the Convention states that 'Each Contracting Party shall, at intervals to be determined by the Conference of the Parties, present to the Conference of the Parties, report on measures which it has taken for the implementation of the provisions of this Convention and their effectiveness in meeting the objectives of this Convention'. The progress of the EU and Member States towards the conservation of biodiversity and halting its loss in their territories is set out in their national reports. The submission date for the fifth national reports was 31 March 2014; the sixth national reports are due on 31 December 2018.

International nature conventions and similar instruments

- UN Convention on Biological Diversity (continued)
 - Two protocols in force
 - Cartagena Protocol on biosafety
 - Adopted 29 January 2000; entered into force 11 September 2003
 - Objective: to protect biological diversity from the potential risks from living modified organisms from biotechnology
 - Council Decision of 25 June 2002 concerning the conclusion, on behalf of the European Community, of the Cartagena Protocol on Biosafety (2002/628/EC)



The purpose of the Cartagena Protocol is 'to contribute to the conservation and sustainable use of biological diversity, taking also into account risks to human health, by providing international rules and procedures in the field of liability and redress relating to living modified organisms'.

The Protocol defines a 'living modified organism' as 'any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology'. The term is generally considered to be synonymous with the term 'genetically modified organism', although definitions and interpretations of the latter term differ widely.

Common living modified organisms include agricultural crops such as tomatoes, corn, cotton and soybeans that have been genetically modified for greater productivity or resistance to pests or diseases. Over 44% of soybeans grown in the USA are genetically modified, as are 36% of maize and nearly 50% of cotton. Approximately 93% of soybeans grown in Brazil are genetically modified, as are virtually all soybeans grown in Argentina. An estimated 80% of soybeans worldwide are genetically modified.

Legislation governing genetically modified organisms in the EU is stricter than in the USA, where they are subject to the Co-ordinated Framework for Regulation of Biotechnology than legislation specifically designed for genetically modified organisms. Legislation that governs genetically modified organisms in the EU includes Directive 2001/18/EC on the deliberate release into the environment of genetically modified organisms, as amended by Directive (EU) 2015/412, and Directive (EC) No. 1830/2003 concerning traceability and labelling.

International nature conventions and similar instruments

- UN Convention on Biological Diversity (continued)
 - Two protocols in force
 - Nagoya Protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilisation
 - Adopted 29 October 2010; entered into force 12 October 2014
 - Council Decision of 14 April 2014 on the conclusion, on behalf of the Union, of the Nagoya Protocol on Access to Genetic Resources (2014/283/EU)



The aim of the Nagoya Protocol is to create greater legal certainty and transparency for users as well as providers of genetic resources by establishing more predictable conditions to access to genetic resources. In addition, the Protocol helps to ensure that when genetic resources leave the country that provides them, benefits from them are shared. Further, the Protocol creates incentives to conserve and sustainably use genetic resources in order to enhance the contribution of biodiversity to development and human well-being.

International nature conventions and similar instruments

- Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety
 - Adopted on 15 October 2010
 - Will enter into force after 40th ratification (2 more needed)
 - Council Decision of 12 February 2013 on the conclusion on behalf of the European Union of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety (2013/86/EU)



Article 27 of the Cartagena Protocol provides that the Conference of the Parties ‘shall, at its first meeting, adopt a process with respect to the appropriate elaboration of international rules and procedures in the field of liability and redress for damage resulting from transboundary movements of living modified organisms, analysing and taking due account of the ongoing processes in international law on these matters, and shall endeavour to complete this process within four years’.

Pursuant to Article 27, an Ad Hoc Open-ended Working Group of Legal and Technical Experts on Liability and Redress was established to draft the Kuala Lumpur Supplementary Protocol. The Supplementary Protocol has been ratified, or acceded to, by the EU as well as over 10 Member States.

When the Protocol enters into force, it will impose liability on an operator who causes significant ‘damage’, defined as ‘an adverse effect on the conservation and sustainable use of biological diversity, taking also into account risks to human health, that [its] measurable or otherwise observable taking into account, wherever available, scientifically-established baselines recognized by a competent authority that takes into account any other human induced variation and natural variation’. The damage must result from living modified organisms that originate in a transboundary movement.

International nature conventions and similar instruments

- Strategic Plan for Biodiversity 2011-2020
 - Adopted at 2010 Conference of the Parties in Nagoya following failure to halt the loss of biodiversity by 2010
 - Sets out a vision, a mission, 5 strategic goals and 20 'Aichi targets'
 - Vision
 - 'By 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people'



International nature conventions and similar instruments

- Strategic Plan for Biodiversity 2011-2020 (continued)

- Mission

‘Take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet’s variety of life, and contributing to human well-being, and poverty eradication. To ensure this, pressures on biodiversity are reduced, ecosystems are restored, biological resources are sustainably used and benefits arising out of utilization of genetic resources are shared in a fair and equitable manner; adequate financial resources are provided, capacities are enhanced, biodiversity issues and values mainstreamed, appropriate policies are effectively implemented, and decision-making is based on sound science and the precautionary approach’



International nature conventions and similar instruments

- Strategic Plan for Biodiversity 2011-2020 (continued)
 - Strategic goals
 - A. Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society
 - B. Reduce the direct pressures on biodiversity and promote sustainable use
 - C. Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity
 - D. Enhance the benefits to all from biodiversity and ecosystem services
 - E. Enhance implementation through participatory planning, knowledge management and capacity building



International nature conventions and similar instruments

- Strategic Plan for Biodiversity 2011-2020 (continued)
 - Targets include
 - At least halve and where feasible bring close to zero rate of loss of natural habitats including forests
 - Establish target of 17% of terrestrial and inland water areas and 10% of marine and coastal areas
 - Restore at least 15% of degraded areas through conservation and restoration
 - Make special efforts to reduce pressures faced by coral reefs



International nature conventions and similar instruments

- Conventions that designate ecologically sensitive areas or otherwise protect biodiversity implemented by the EU and/or its Member States
 - Convention on wetlands of international importance especially as waterfowl habitat 1971 (Ramsar Convention); entered into force 1975
 - UN World Heritage Convention of 1972; entered into force 1975
 - Council of Europe Convention on the conservation of European wildlife and natural habitats 1979 (Bern Convention); entered into force 1982
 - Council Decision of 3 December 1981 concerning the conclusion of the Convention on the conservation of European wildlife and natural habitats (82/72/EEC)
 - Established Emerald Network of protected areas that includes the Natura 2000 network
 - May be multiple designations of a single area, e.g. Natura 2000 site, World Heritage site, Ramsar site, etc.



Special Protection Areas and Sites of Community Importance (SCIs) under the Birds and Habitats Directives automatically become part of the Emerald Network, which is a Pan-European Ecological Network that extends beyond the EU-28 to the territories of 20 other European countries and four countries in Africa. The procedures for establishing Areas of Conservation Interest (ASCIs), as protected areas in the Emerald Network are known, track those for SCIs in the Natura 2000 network. Establishment of the Emerald Network began in 1998, later than that of the Natura 2000 network. Due to this and various other factors, it is proceeding much slower than the Natura 2000 network.

International nature conventions and similar instruments

- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
 - Entered into force 1975
 - Council Decision (EU) 2015/451 of 6 March 2015 concerning the accession of the European Union to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
 - Aim: to ensure that international trade in specimens of wild animals and plants does not threaten their survival



CITES resulted from a resolution adopted at a meeting of members of the IUCN in 1963, with the text being finally agreed at a meeting of 80 countries on 3 March 1973. The EU became a party to CITES following its ratification by all Member States.

Some EU legislation on CITES has established stricter standards than CITES itself.

International nature conventions and similar instruments

- CITES (continued)
 - Implementation in the EU
 - Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein (Basic Regulation)
 - Commission Regulation (EC) No 865/2006 laying down detailed rules concerning the implementation of Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein, as amended (Implementing Regulation)
 - Commission Implementing Regulation (EU) No 792/2012 laying down rules for the design of permits, certificates and other documents provided for in Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating the trade therein and amending Regulation (EC) No 865/2006 (Permit Regulation)



International nature conventions and similar instruments

- Convention on conservation of migratory species of wild animals 1979 (Bonn Convention)
 - Entered into force 1983
 - Council Decision of 24 June 1982 on the conclusion of the Convention on the conservation of migratory species of wild animals (82/461/EEC)
- Convention for the Protection of the Marine Environment of the North-East Atlantic 1992 (OSPAR Convention)
 - Entered into force 1998
 - Council Decision of 7 October 1997 on the conclusion of the Convention for the protection of the marine environment of the North-East Atlantic (98/249/EC)



Parties to the Bonn Convention collaborate to conserve migratory species and their habitats by providing strict protection for endangered migratory species, concluding multilateral agreements for the conservation and management of migratory species that require or would benefit from international co-operation, and by carrying out co-operative research activities.

The Bonn Convention recognises that States must be the entities that protect migratory species that live within or pass through their territories. The Convention aims to conserve terrestrial, marine and avian migratory species throughout their ranges. Migratory species threatened with extinction are listed on Appendix I of the Convention. Migratory species that need or would significantly benefit from international co-operation are listed in Appendix II.

The OSPAR Convention guides international co-operation on the protection of the marine environment of the North-East Atlantic. Work under the Convention is managed by the OSPAR Commission, which consists of representatives of the governments of 15 Parties and the European Commission, as representative of the EU.

OSPAR's mission is the conservation of marine ecosystems and the safeguarding of human health in the North-East Atlantic by preventing and eliminating pollution; protecting the marine environment from the adverse effects of human activities; and by contributing to the sustainable use of the seas.

OSPAR's work is organised under six strategies: biodiversity and ecosystem; eutrophication; hazardous substances; offshore industry; radioactive substances; and the strategy for the joint assessment and monitoring programme. The six strategies form the basis for the ecosystem approach. A programme of work is designed and

implemented annually for each strategy.

International nature conventions and similar instruments

- 2030 Agenda and 17 sustainable development goals agreed at Rio + 20 UN Conference on sustainable development 2012
 - Commission Communication, Next steps for a sustainable European future; European action for sustainability (COM(2016) 739 final)
 - Plus other Council and Commission documents



The Earth Summit, held in Rio de Janeiro from 3-14 June 1992, was the first global conference to address environment and development in an integrated manner. The summit resulted in the adoption of Agenda 21, a wide-ranging action programme that sought to achieve sustainable development worldwide.

Ten years after the Earth Summit, the World Summit on Sustainable Development was held in Johannesburg, South Africa, from 26 August to 4 September 2002. The World Summit adopted the Johannesburg Plan of Implementation, the aim of which was the reinforcement and further promotion of the outcomes of the Earth Summit.

The Rio+20 Conference took place in Brazil on 20-22 June 2012 to mark the 20th anniversary of the Earth Summit and the 10th anniversary of the World Summit. Key topics at the Rio+20 Conference were the reduction of poverty, the advancement of social equity, and ensuring environmental protection.

The 2030 Agenda for Sustainable Development is a plan of action for people, the planet and prosperity to be implemented collaboratively by all countries and stakeholders.

The 17 Sustainable Development Goals and 169 targets in the 2030 Agenda seek to build on the Millennium Development Goals in order to realise human rights and to achieve gender equality and the empowerment of women.

International nature conventions and similar instruments

- UN General Assembly, Resolution adopted by the General Assembly on 25 September 2015; Transforming our world: the 2030 Agenda for Sustainable Development
 - Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
 - Clause 15.5 'Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species'



Habitats and Birds Directives

- Natura 2000 network
 - Consists of areas designated under the Habitats Directive (92/43/EEC, consolidated version; 1 January 2007) and classified under the Birds Directive (2009/147/EC)
 - Will be examined in presentation on Habitats and Birds Directives in light of CJEU case law



Other EU nature law instruments

- Communication on green infrastructure (GI) - enhancing Europe's natural capital (COM(2013) 249 final)
- Regulation (EU) No 1143/2014 on the prevention and management of the introduction and spread of invasive alien species
- Environmental Liability Directive (2004/35/EC)
- Environmental Crime Directive (2008/99/EC)

- Consultation on the future EU initiative on No Net Loss of biodiversity and ecosystem services (5 June to 17 October 2014)
 - Action 7 of the EU Biodiversity Strategy
 - Objective also set out in EU Biodiversity Strategy and Roadmap to a Resource Efficient Europe



EU nature legislation protects a wide variety of habitats and species. In June 2014, the Commission launched an internet consultation on the EU No Net Loss initiative. The consultation asked governmental authorities, businesses, non-governmental organisations and interested members of the public for their views on: a no net loss initiative at EU level: how to develop the policy and apply the mitigation hierarchy; the scope and scale of the initiative; the drivers of biodiversity loss and which economic sectors to include; how to address the challenges related to offsetting; and which policy instruments to apply.

The Commission is preparing an impact assessment to support the No Net Loss initiative taking into account the results of the consultation.

Other EU nature law instruments - Green Infrastructure

- European Commission, Building a Green Infrastructure for Europe (2013)
 - Describes GI as
 - ‘a strategically planned network of high quality natural and semi-natural areas with other environmental features, which is designed and managed to deliver a wide range of ecosystem services and protect biodiversity in both rural and urban settings.
 - More specifically GI, being a spatial structure providing benefits from nature to people, aims to enhance nature’s ability to deliver multiple valuable ecosystem goods and services, such as clean air or water’
 - Will make Natura 2000 network more coherent by making the protected areas more resilient and providing buffers against impacts on those areas



Implementation of GI beyond the Natura 2000 network is designed to help strengthen the coherence of sites in the network by creating buffer zones and improving the resilience of such sites. GI also assists in maintaining the health of ecosystems, and provides natural solutions, including ecosystem services, that benefit nature and people.

Other EU nature law instruments - Green Infrastructure

- Building a green infrastructure for Europe (continued)
 - Foster a better quality of life and human well-being by, among other things, providing a high quality environment in which to live and work
 - Improve biodiversity by, among other things, reconnecting isolated nature areas and increasing the mobility of wildlife across the wider landscape
 - Protect us against climate change and other environmental disasters, for instance by alleviating floods, storing carbon or preventing soil erosion
 - Encourage a smarter, more integrated approach to development which ensures that Europe's limited space is utilised in as efficient and coherent a way as possible



Other EU nature law instruments - Green Infrastructure

- Communication on green infrastructure (GI) - enhancing Europe's natural capital (COM(2013) 249 final)
 - Contributes to all six targets of the EU Biodiversity Strategy
 - EU Biodiversity Strategy, Action 6
 - 'Set priorities to restore and promote the use of green infrastructure'
 - Aims of GI strategy include
 - Promoting GI in agriculture, forestry, nature, water, marine and fisheries, regional and cohesion policy, climate change mitigation and adaptation, transport, energy, disaster prevention, land use policies and other key policies
 - Promoting investment in GI projects



Other EU nature law instruments - Green Infrastructure

- 16 December 2015: Council called on the Commission to put forward a proposal for an instrument equivalent to the existing trans-European networks for green infrastructure in Europe by 2017
 - Trans-European Network for Green Infrastructure (TEN-G)
 - Initiative to develop a GI similar to the infrastructure for large-scale EU transport (TEN-T) and energy (TEN-E) networks



Other EU nature law instruments - Invasive alien species

- Regulation (EU) No 1143/2014 on the prevention and management of the introduction and spread of invasive alien species (IAS)
 - 1 January 2015: entered into force
 - Over 12,000 alien species estimated to exist in the EU
 - About 10-15% of alien species are invasive
 - Occur in all major taxonomic groups, from mammals, amphibians, reptiles, fish, invertebrates and plants to fungi, bacteria and other micro-organisms



Invasive Alien Species (IAS) are species of animals and plants that have been, are being, or will be introduced accidentally or intentionally into an environment where they are not naturally found, with serious negative consequences for that environment. IAS are a major threat to native plants and animals in the EU. They cause damage worth billions of euros to the EU economy each year. The EU has concluded that action at EU level is more effective than action at the Member State level due to the transboundary movement of IAS.

The core of the IAS Regulation is the list of IAS of Union concern. This list is regularly updated with both the European Commission and Member States being able to propose species, including a risk assessment, for inclusion on the list. The proposals are submitted to a scientific forum that consists of scientific representatives appointed by Member States. The forum issues opinions on whether the submitted risk assessments are robust and fit for purpose.

Other EU nature law instruments - Invasive alien species

- IAS introduced into the EU
 - Intentionally for use in farming, forestry, aquaculture, horticulture, recreational purposes (e.g., aquaculture or recreational angling), pets and garden plants (e.g., Japanese knotweed) or biocontrol agents
 - Unintentionally as contaminants of other products (e.g., ragweed seeds in bird feed) or as 'hitchhikers' and 'stowaways' on board vessels or equipment



Other EU nature law instruments - Invasive alien species

▪ Regulation

- Focuses on worst IAS first
- Introduced three main types of measures
 - Prevention: measures to prevent new IAS from entering the EU, intentionally or unintentionally
 - Early warning and rapid response: Member States directed to establish an early warning system to detect the presence of IAS as early as possible and to take rapid measures to prevent it becoming established
 - Management of already established invasive alien species: management of them to prevent their continued spread and to minimise harm caused by them



Other EU nature law instruments - Invasive alien species

- January 2016: first baseline list of IAS published
 - 37 species; effective 3 August 2016
 - Included grey squirrel (*Sciurus carolinensis*), and Asian hornet (*Vespa velutina nigrithorax*)
- July 2017: first update to list
 - Added 12 more species; effective 2 August 2017
 - Included giant hogweed (*Heracleum mantegazzianum*)



Other EU nature law instruments - Invasive alien species

- Giant hogweed
 - Introduced into EU as an ornamental plant
 - Forms dense impenetrable stands
 - Can cause severe burns and dermatitis when in contact with skin that is exposed to sunlight
 - May cause blindness when in contact with eyes
 - Germany: annual cost of eradication and medical treatment estimated between EUR 6 to 21 million



Other EU nature law instruments - Liability for environmental damage

- Environmental Liability Directive (2004/35/CE; ELD)
 - 30 April 2007: deadline for transposition
 - Key purposes
 - To implement polluter pays principle in respect of accidental pollution
 - '[I]nduce operators to adopt measures and develop practices to minimise the risks of environmental damage'
 - Prevent and remediate environmental damage in order to lead to a reduction in the number of future contaminated sites
 - Establish liability for environmental damage to species and natural habitats protected under Birds and Habitats Directives in order to reduce the loss of biodiversity



The Environmental Liability Directive (ELD) had a long history. In 1983, the European Commission proposed the introduction of civil liability for damage to a third party from waste. Whilst the proposal was not adopted, in 1984, the Council stated that it would determine 'conditions for implementing the civil liability of the producer in the case of damage or that of any other person who may be accountable for the same damage and shall also determine a system of insurance'.

The focus of the ELD subsequently changed from waste to include environmental damage from all types of activities carried out by an operator. In February 2000, the Commission issued a White Paper on Environmental Liability in which it stated that it would propose a Directive to implement the polluter pays principle for accidental damage. The Directive would include an administrative liability system as well as a civil tort liability system.

In July 2001, the focus of the ELD changed again when the European Commission abandoned its proposals for a civil tort liability system, stating instead that it would propose only an administrative liability system.

On 21 February 2002, the Commission submitted its proposal for the ELD to the European Parliament and the Council. The final version of the ELD entered into force on 30 April 2004.

Other EU nature law instruments - Liability for environmental damage

- Transposed into EU-27 national law by June 2010
 - Followed by Croatia (on accession to the EU)
- Two categories of 'operators', that is, persons who are liable for preventing or remediating an imminent threat of, or actual, environmental damage
 - Annex III: strict liability for damage to species and natural habitats protected under the Birds and Habitats Directives, water and land
 - Non-Annex III: fault-based liability for damage to species and natural habitats protected under the Birds and Habitats Directives



Note the close link between so-called biodiversity damage under the ELD and the Birds and Habitats Directives. Biodiversity damage is intentionally linked to the Birds and Habitats Directives.

Other EU nature law instruments - Liability for environmental damage

- Member States may extend scope of damage to protected species and habitats to those protected under national law
 - Extension of liability to nationally-protected species and natural habitats (14 Member States)
 - Austria, Belgium, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Poland, Portugal, Spain, Sweden and UK (not Scotland)



Other EU nature law instruments - Liability for environmental damage

- Threshold for damage to protected species and natural habitats
'any damage that has significant adverse effects on reaching or maintaining the favourable conservation status of ... habitats or species [protected by Birds and Habitats Directives]. The significance of such effects is to be assessed with reference to the baseline condition, taking account of the criteria set out in Annex I'
 - Annex I: measurable data, including criteria on the role of the species or habitat in relation to its conservation, and its capacity to recover and propagate to determine whether the species or habitat has suffered damage that adversely affects its ability to reach or maintain its favourable conservation status in (1) the European territory of the Member State, (2) the European territory of an individual Member State, or (3) its natural range



Note again the close link between liability for biodiversity damage under the ELD and the Birds and Habitats Directives.

Other EU nature law instruments - Liability for environmental damage

- Liability for damage to species and habitats protected by the Birds and Habitats Directives
 - Species of regularly occurring migratory birds (as mentioned in article 4(2) of the Birds Directive) and their habitats
 - Species of vulnerable, rare and endangered birds (as listed in Annex I of the Birds Directive) and their habitats
 - Natural habitats (as listed in Annex I of the Habitats Directive)
 - Species of animals and plants and their habitats (as listed in Annex II of the Habitats Directive)
 - Species of animals and plants (as listed in Annex IV of the Habitats Directive) and their breeding sites or resting places
 - Does not apply to damage to all species of naturally occurring wild birds in the EU



Other EU nature law instruments - Liability for environmental damage

- Land damage
 - Significant risk of an adverse effect on human health remediated by removal, control, containment or diminution of contaminants so that land no longer poses such a significant risk
- Remedial measures for land damage
 - Carry out 'necessary measures ... to ensure, as a minimum, that the relevant contaminants are removed, controlled, contained or diminished so that the contaminated land, taking account of its current use or approved future use at the time of the damage, no longer poses any significant risk of adversely affecting human health'



Other EU nature law instruments - Liability for environmental damage

- Water damage

- 'any damage that significantly adversely affects:
 - (i) the ecological, chemical or quantitative status or the ecological potential, as defined in [Water Framework Directive (2000/60/EC)], of the waters concerned ...; or
 - (ii) the environmental status of the marine waters concerned, as defined in [Marine Strategy Framework] Directive 2008/56/EC, in so far as particular aspects of the environmental status of the marine environment are not already addressed through Directive 2000/60/EC'



Note the close links between water damage under the ELD and the Water Framework Directive and the Marine Strategy Framework Directive.

Other EU nature law instruments - Liability for environmental damage

- Remedial measures: water, protected species and natural habitats
 - Primary remediation: remediation and restoration to 'baseline' condition
 - Complementary remediation: if damaged site cannot be fully restored, restoration of nearby site in addition to partial remediation of damaged site
 - Compensatory remediation: loss of natural resources and services from them to people and other natural resources between time that environmental damage occurred and its full remediation (providing, enhancing or improving same or new natural resources at damaged and/or alternative sites)



The ELD introduced broader remedial measures for water and biodiversity damage from remedial measures from those that already existed in the domestic law of Member States. Only Germany imposed complementary remediation prior to the transposition of the ELD into Member State domestic law. Neither Germany nor any other Member State imposed compensatory remediation for environmental damage prior to that time.

Other EU nature law instruments - Liability for environmental damage

- Applies to incidents after 30 April 2007
- Exceptions
- Rights of non-governmental organisations and other interested parties
- Optional provisions include
 - Scope of liability
 - Defences
 - Mandatory financial security
- Supplements existing Member State law; does not replace it, but Member States cannot apply less stringent law to ELD incidents



The defences under the ELD consist of mandatory and optional defences. The mandatory defences are environmental damage that (1) 'was caused by a third party and occurred despite the fact

that appropriate safety measures were in place', and (2) 'resulted from compliance with a compulsory order or instruction emanating from a public authority other than an order or instruction consequent upon an emission or incident caused by the operator's own activities'.

The optional defences are (1) the permit defence (compliance with a specified permit), and (2) the state-of-the-art defence (in which the harm from the emission/release was not known at the time of the emission/release).

Seventeen Member States have adopted the permit defence: Belgium (regional level), Croatia, Cyprus, the Czech Republic, Denmark, Estonia (except genetically modified organisms), Finland (limited), Greece, Italy, Latvia (except genetically modified organisms), Lithuania, Malta, the Netherlands (limited), Portugal, Slovakia, Spain, and the UK (except genetically modified organisms in Wales).

Fifteen Member States have adopted the state-of-the-art defence: Belgium (regional level), Croatia, Cyprus, the Czech Republic, Estonia (except GMOs), France, Greece, Italy, Latvia (except genetically modified organisms), Malta, the Netherlands (limited), Portugal, Slovakia, Spain, and the UK (except genetically modified organisms in Wales).

All Member States have adopted joint and several liability except Denmark, Finland, France, Italy and Slovakia, which have adopted either proportional liability or modified proportional liability.

Member States that have introduced, or have stated they will introduce, mandatory financial security are: Spain; Portugal; Slovakia; the Czech Republic; Bulgaria; Greece; Hungary; and Romania.

Other EU nature law instruments - Liability for environmental damage

- Imminent threat of environmental damage
 - Operator must carry out preventive measures 'without delay'
 - Notify competent authority 'without delay' if measures fail to dispel threat of damage
- Occurrence of environmental damage
 - Operator must notify competent authority 'without delay'
 - 'Immediately' carry out emergency remedial actions
 - Carry out remedial measures in accordance with the ELD



Other EU nature law instruments - Liability for environmental damage

- Note
 - Member States also impose liability for environmental damage under domestic law



Other EU nature law instruments - Liability for environmental damage

- ELD underwent REFIT (Regulatory Fitness and Performance) programme as part of its Better Regulation programme
 - European Commission concluded that there was insufficient information fully to carry out the process



The REFIT evaluation covers the scope of the ELD, its practical implementation, and links between the ELD and related EU, national, and international law.

The REFIT evaluation investigated all aspects of the functioning of the ELD, consisting of:

- ‘the trigger as well as in the application of preventive action as well as remedial action of liable operators,
- the enforcement including approval of remediation plans by the competent authorities,
- the use of the three remedial action types under the ELD: primary, complementary and compensatory remediation of environmental damage,
- the contribution by civil society (persons affected by environmental damage and environmental NGOs) to the detection and remediation of environmental damage,
- the cover (offer and demand) of financial security including insurance for ELD liabilities,
- the potential deterrent effect and enhanced risk management (changed behaviour), [and]
- the contribution of the Directive to reducing of environmental damage and halting biodiversity loss, improving the freshwater and marine water quality as well as soil protection in the EU’.

The evidence base for the REFIT evaluation included reports submitted by Member States to the Commission in 2013, implementation and evaluation studies commissioned by the Commission in 2012 and 2013, conclusions from the Commission’s ELD report of

2010, and input by stakeholders.

Other EU nature law instruments - Liability for environmental damage

- REFIT (continued)
- 14 April 2016
 - Report from the Commission to the Council and the European Parliament under Article 18(2) of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage (COM/2016/0204 final)
 - Commission Staff Working Document REFIT Evaluation of the Environmental Liability Directive Accompanying the document Report from the Commission to the European Parliament and to the Council pursuant to Article 18(2) of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage (SWD(2016) 121 final)



Other EU nature law instruments - Liability for environmental damage

- February 2017: European Commission finalised the Multi-Annual Work Programme 2017 - 2020
 - Three main pillars
 - Improve the evidence base for evaluation and decision-making for the Commission, Member States, stakeholders and practitioners (assessment framework and ELD registry)
 - Support implementation through tools and measures for more even implementation (common understanding of terms and concepts, capacity building and training)
 - Ensure sufficient availability of financial security, in particular for large losses or in case of insolvency (secure, sufficient and available instruments to cover ELD liabilities)



Other EU nature law instruments - Environmental crimes

- Directive 2008/99/EC on the protection of the environment through criminal law
- Focus
 - ‘To protect the environment more effectively’ by providing ‘more dissuasive penalties for environmentally harmful activities, which typically cause or are likely to cause substantial damage to the air, including the stratosphere, to soil, water, animals or plants, including to the conservation of species’
- Liability not limited to damage caused by an operator



Following a lengthy process in which the Council and the European Commission introduced separate initiatives on the adoption of legislation on environmental crimes, the EU adopted the Directive on environmental crimes on 19 November 2008. A major reason for the Directive was the large differences between criminal sanctions for environmental offences in Member States. The European Commission concluded that some sanctions were not sufficiently stringent to ensure a high level of environmental protection throughout the EU.

The Directive establishes minimum requirements to be implemented in the domestic criminal law of Member States. The Directive does this by listing categories of environmental offences that are considered to be criminal offences if they are committed intentionally or with serious negligence. The Directive did not create new environmental offences.

Other EU nature law instruments - Environmental crimes

- Objective
 - To strengthen 'availability of criminal penalties, which demonstrate a social disapproval of a qualitatively different nature compared to administrative penalties or a compensation mechanism under civil law'
- Categories of criminal offences
 - 'Member States shall ensure that the following conduct constitutes a criminal offence, when unlawful and committed intentionally or with at least serious negligence'
 - Nine categories of conduct



Other EU nature law instruments - Environmental crimes

- Four categories contain term 'causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants'
 - Discharges and emissions of quantity of materials or ionising radiation into air, water or soil
 - Waste collection, transport, recovery and disposal, including management and supervision
 - Operation of plants involving dangerous activities and substances
 - Production, processing, handling, use, holding, storage, transport, import, export and disposal of nuclear materials or other hazardous radioactive substances which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants



Other EU nature law instruments - Environmental crimes

- Two categories require conduct to cause more than 'a negligible quantity of such specimen and [to have more than] a negligible impact on the conservation of the species'
 - Killing, destruction, possession or taking of specimens of 'protected wild fauna and flora species'
 - Defined by reference to Annex IV of the Habitats Directive and Annex I of the Birds Directive
 - Trade in specimens of 'protected wild fauna or flora species'
 - Defined by reference to Annex A or B of Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein (Basic Regulation)



Other EU nature law instruments - Environmental crimes

- Categories of criminal offences (continued)
 - Category for
 - ‘Any conduct which causes the significant deterioration of a habitat within a [special protection area under the Birds Directive or a special conservation area under the Habitats Directive (Natura 2000 site)]’
 - Other categories
 - Shipments of waste
 - Production, importation, exportation, placing on the market or use of ozone-depleting substances



Other EU nature law instruments - Environmental crimes

- Note
 - Member States also have legislation for environmental offences under domestic law



Other EU nature law instruments - relationship to Birds and Habitats Directives

- Environmental Impact Assessment Directive (2011/92/EU as amended by 2014/52/EU)
- Strategic Environmental Assessment Directive (2001/42/EC)
- Water Framework Directive (2000/60/EC)
 - Will be covered in later presentation



Attitudes of Europeans to biodiversity

- June 2015: Survey by the Commission on the attitudes of Europeans towards biodiversity in general, and to see whether their views have changed over the past few years
 - Key results
 - 60% had heard the term 'biodiversity' but less than one-third knew what it meant
 - 66% did not feel informed about biodiversity loss
 - Biggest threats to biodiversity loss were considered to be pollution and man-made disasters
 - 73% had not heard of the Natura 2000 network



The survey by the Commission in 2015 followed a survey on attitudes of Europeans towards biodiversity carried out in 2013. The 2013 survey revealed that, at that time, 44% had heard the term 'biodiversity', 30% had heard the term but did not know what it meant, and 26% had never heard of it.

Attitudes of Europeans to biodiversity

- Attitudes of Europeans towards biodiversity (continued)
 - Key results (continued)
 - 67% agreed that looking after nature is essential for tackling climate change and 60% agreed that our health and well-being are based upon nature and biodiversity
 - Over three-quarters believed that mankind has a responsibility to look after nature and that it is important to stop biodiversity loss
 - 93% considered the EU should better inform people about the importance of biodiversity
 - 65% considered they were making a personal effort to protect biodiversity and nature

<http://ec.europa.eu/COMMFrontOffice/PublicOpinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/2091>

