



# NEWSLETTER

## July 2020



### Edito

A ‘game changer’? The European Green Deal provides a roadmap with actions to boost the efficient use of resources by moving to a clean, circular economy, restore biodiversity and cut pollution. It outlines investments needed and financing tools available and explains how to ensure a just and inclusive transition. Subsequently, the EU Biodiversity Strategy for 2030 (BD2030), “Bring nature back in our lives” was adopted on 20 May 2020 in tandem with the Farm to Fork Strategy. The strategy takes a clear approach across terrestrial, freshwater and marine ecosystems, their resilience and functions, dependencies and connectivity (an ‘ecological network’ for EU) - in essence, how can we effectively and responsibly manage ecosystem natural capital of Europe.

The centre piece of BD2030 is the EU Nature restoration Plan and the design of a very operational policy to mainstream biodiversity into the sectors and benefits to society. Consequently, the main thematic content of the strategy is structured around binding targets and the principles of Protect and Restore, through an explicit governance model for transformative change. This is what one can witness, politically speaking. Question is: is this a paradigm shift for real? After a century of dealing with nature as a disposable commodity, is Europe fundamentally putting nature back as our common base for the socio-economic notion of capital, and run up an ecological debt which needs to be paid back? It would appear so – impressive turning around of the societal value-chain.

Through its soon-to be adopted Strategy 2021-2030, EEA-Eionet aspire to become an agent of such transformative changes. Biodiversity-related policy and knowledge landscapes in Europe are substantially changing to reflect diversity and knowledge needs and sources. We have increasingly incorporated new environmental data streams at multiple spatial levels, connected them to socio-economic variables and timely use of satellite and in-situ observations. This rapid pace of change will continue and our new strategy aims to embrace this knowledge revolution to deliver high quality and policy-relevant knowledge, with full contribution from European Topic Centres.

*Ronan Uhel, Head of Natural Capital and Ecosystems, European Environment Agency (EEA)*

### Focus on the new member of the ETC/BD Core team

Aurélien Carré recently joined the ETC/BD Core team as a Senior officer on Ecosystem assessments. He arrives from the IUCN French National Committee, where he was working on the implementation of the IUCN Red List of Ecosystems in France. Familiar with the whole European “ecosystem” of habitat classification, assessment and reporting, it is with great motivation that he takes up his new position and will eventually take over Sophie Condé’s duties as task manager and expert.





## Nature Directives

### [Reporting under the Nature Directives](#)

#### Article 17 and Article 12 National Summaries

The reporting on National Summary statistics, which were made available in the first half of 2019, underwent public consultation with Member State experts and Member State authorities. This step formally closes the reporting exercise for the Member States. The online summary statistics display the reported Member State information on their habitats and species (including birds) as an outcome of the Article 17 and Article 12 reporting process for the 2013 - 2018 period.

The summary statistics from the Habitats Directive Article 17 reporting on species and habitats are available on the State of Nature 2020 web page [here](#) and Article 12 summaries can be accessed [here](#).

#### EU assessments of Article 17 and Article 12 reports

Based on the Member State Article 17 national reports for habitats and species, the ETC/BD undertook an EU assessment of status and trend for each protected habitat and species in each biogeographical or marine region where it is reported. The assessment exercise took place from November 2020 until the start of the public consultation on February 14th with expert input from several ETC/BD partners along with colleagues from the EEA. In total, 3 753 assessments were completed by the experts, of which 828 were habitats and 2 925 were species. The public consultation, which is a part of the global assessment process, ran until 8th March 2020.

The purpose of the EU assessment is to evaluate at the EU biogeographical level progress made to improving the Conservation Status of habitats and species, this in turn allows the evaluation of progress towards Target 1 of the EU Biodiversity Strategy 2020.

# National summary dashboards - Habitats Directive – Art.17



#### Conservation status and trends of habitats and species

19 Dec 2019

This dashboard provides information on conservation status and trends of habitats and species at the level of Member States.



#### Main pressures and threats

19 Dec 2019

This dashboard provides information about pressures and threats acting on habitats and species, sorted by their level of importance.



#### Proportion of habitats area in good or not good condition

19 Dec 2019

This dashboard provides information on the proportion of area of habitat types in good and not good condition. This information relates to the parameter 'structure and functions of a habitat type'.



The online [Article 17 tool](#) was put in place by EEA with contribution from ETC/BD and provides access to information on status and trends of habitats and species reported by Member States together with the actual EU assessments undertaken, including the EU Conservation Status and ‘progress to Target 1’ assessment. The comments made during the public consultation are also accessible via the online Article 17 tool.

The parallel assessment of EU population status of bird species based on the Article 12 reports delivered by Member States was undertaken by the Red List Consortium under contract from the European Commission. As for Article 17, the EU birds status assessment contains the evaluation of status and trends at EU level together with evaluation of ‘progress to Target 1’ of the EU Biodiversity Strategy 2020. The outcomes of this process together with information on birds’ populations and trends will be made available soon on the [Article 12 online tool](#).

### State of Nature in the EU report

The outcomes of Article 12 and Article 17 reporting both at Member State and EU level form the basis for the State of Nature in the EU report. This EEA report provides the overview of the main results from the two reporting processes including the conservation status, trends, main drivers, impact of measures including the impact of Natura 2000 network and the global assessment of progress towards the Target 1 of the EU Biodiversity Strategy. The report further highlights the successes in nature conservation, shortcomings in current protection measures and actions and measures needed to further improve the conservation status of targeted habitats and species and the population status of birds.

The draft report is a result of a fruitful collaboration between several ETC partners, who had a major contribution to this report and EEA. The draft EEA Report ‘*State of Nature in the EU – Results from the reporting under the Nature Directives 2013-2018*’ was made available for the review via Eionet-Forum platform and the consultation of this report took place from 4th to 25th June 2020. The final EEA report is to be published in October 2020.

### [Natura 2000](#)

#### European Natura 2000 database End 2019

The annual update of the Natura 2000 database has been finalised in March, compiling new submissions made by 20 out of 27 Member States (Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia and Spain) until January 2020.

This dataset is publically available here:

<https://www.eea.europa.eu/data-and-maps/data/natura-11>

The Natura 2000 database is the sole source of information for the production of the Natura 2000 barometer:

<b>Number of Natura 2000 sites</b>	27,852	26,81 without the UK
<b>Natura 2000 land area (km<sup>2</sup>)</b>	784,994	763, 986 without the UK
<b>Natura 2000 marine area (km<sup>2</sup>)</b>	573,131	441,001 without the UK
<b>Natura 2000 total area (km<sup>2</sup>)</b>	1,358,125	1,204,988 without the UK
<b>Current Proportion European land covered (%)</b>	17,9	of which 8,6 corresponds to the UK

Likewise, The Natura 2000 Viewer has been updated with the new information provided by the latest public European Natura 2000 database (end of 2019). It is a user friendly GIS tool that allows users to locate Natura 2000 sites and to get the ecological information of each site all across the European Union.

<https://natura2000.eea.europa.eu>



## SEBI indicators

The update of the indicators continues with a new version of the **Ecological footprint of Europe**, and with two additional years extending the time series from 1961 up to 2016. The total ecological footprint of the EU-27 Member States plus the United Kingdom is high and is now more than twice the biocapacity available in the region (i.e. the capacity of ecosystems to produce useful biological materials and to act as sinks of carbon emissions). The picture is similar for the EEA-39 countries ([SEBI023](#)).

The 2019 Eurobarometer on the attitudes of Europeans towards biodiversity supported the update of the indicator on **Public awareness of biodiversity in Europe** ([SEBI026](#)). Recognition and understanding of the term 'biodiversity' has increased in the European Union. 71 % of interviewed EU citizens have heard of biodiversity and over 41 % of these know what it means. At least eight out of ten Europeans consider the various effects of biodiversity loss to be serious for both humans and nature, and agree that it is important to halt its loss.

New versions of the indicators on Abundance & distribution of selected species (SEBI001), on Nationally designated protected areas and on Natura 2000 (SEBI007 and 008) will be available soon. Those dedicated to Species and Habitats of European Interest (SEBI003 and 005) will be updated in the coming months thanks to the new version of Article 17 European database.

New data from FAO should support the revision of the indicator on Livestock genetic diversity (SEBI006).

Other EEA indicators of relevance for biodiversity concerns have been updated related to [fish distribution in European seas](#), and the [landscape fragmentation](#).

## Ecosystem Assessments

A report on a European Urban Biodiversity Index (EUBI) prepared by S4E as ETC/BD partner, presents a continuation of 2017 and 2018 efforts to develop a composite index for urban biodiversity utilizing pan-European datasets from the Copernicus programme and Articles 12 and 17 reporting obligations.

Download the report here:

[https://www.eionet.europa.eu/etcs/etc-bd/products/etc-bd-reports/eubi\\_cities\\_biodiversity\\_indicator](https://www.eionet.europa.eu/etcs/etc-bd/products/etc-bd-reports/eubi_cities_biodiversity_indicator)

## EU Biodiversity strategy

A brief note prepared by Ecologic as ETC/BD partner analyses the quantifiable national biodiversity commitments across the EU Member States in their NBSAPs submitted to the CBD. The aim is to answer two questions: which topics are prioritized across countries, based on the existence of quantified targets? Which of the existing targets could be integrated into a post-2020 EU biodiversity strategy?

Download the report here:

<https://www.eionet.europa.eu/etcs/etc-bd/products/etc-bd-reports/review-of-the-existing-quantitative-national-targets-in-eu-nbsaps-of-european-countries>

## EUNIS

### [EUNIS habitats](#)

The EUNIS habitats revision has progressed to now include a revised Marine classification which was made available online in March. The revision addresses benthic, pelagic and ice associated habitats, the crosswalks to marine EUNIS 2012 habitats, Annex I habitats Directive and the European Red List of Habitats will be available soon. The revised marine classification can be found at:

<https://www.eea.europa.eu/data-and-maps/data/eunis-habitat-classification>



ETC/BD partner contribution to the marine revision include current partners JNCC & SLU, and previous partner ISPRA along with colleagues from MNHN.

An EIONET webinar to discuss the freshwater habitat revision will take place in December 2020 where ETC/BD partners WENR and MNHN as well as ETC/ICM will participate and where the proposed revision will be presented along with themed discussions on specific topics raised during the 2019 freshwater consultation process. A freshwater expert workshop has been postponed until 2021, the intention of which is to involve EUNIS, Water Framework Directives and Habitat Directive experts to finalise the revised classification. The remaining habitat group for revision, habitat complexes, is also postponed until 2021. While most habitat groups have now undergone the revision, outstanding work on the crosswalks to the former EUNIS classification, Annex I habitat and the European Red List of habitats continue with ETC/BD partner WENR.

### EUNIS species

Data related to species names are often difficult to handle because of issues related to nomenclature and change in taxonomic concepts over time. Naturalis and SLU as ETC/BD partners support the EEA in the further development of the EUNIS species component by sharing their experience in the development of species data models and started discussing the specific user requirements from EEA and EIONET for information technology infrastructure developed in the context of the CoL plus project.

## **Invasive Alien Species (IAS)**

UBA, MNHN, SLU and S4E as ETC/BD partners support the European Commission and the Member States in the reporting under the IAS regulation.

Whereas the reporting was done in 2019, the ETC/BD is currently analysing the reported data on pressures caused by IAS on the target species and habitats of the Nature Directives.

The list of IAS of Union concern and other relevant material such as statistics based on the data reported by the Member States is available here:

<https://ias.eea.europa.eu>

## **European inventory of nationally designated protected areas (CDDA)**

The annual update of the CDDA - being one of the EIONET core dataflows - has been finalised. During the data collection phase, S4E as ETC/BD partner provided support to countries for technical questions. Fortunately, it can be noted that this year, countries were able to improve data quality and also started to provide sites which may meet the definition of 'other effective area-based conservation measures' (OECMs). The CDDA dataset will be delivered to the World Database on Protected Areas (WDPA) making up the European component of the global dataset.

## **News from EEA and EIONET**

After a first meeting of the National Focal Points (NFPs) at the EEA in February, most subsequent Eionet activities were transformed into webinars and online meetings, as the COVID-19 pandemic spread throughout Europe. This has nevertheless fostered lively and fruitful interactions with EEA staff, NFPs and ETC managers to work on the elaboration of the [EEA and Eionet strategy 2021-2030](#) as well as the Single Programming Document 2021-23 and Eionet modernization. For ETC/BD, this comes in conjunction with the new EU Biodiversity strategy to 2030 and opens exciting new perspectives.



Just a few weeks after the release of the EU Biodiversity strategy, EEA published a briefing “[Building a coherent Trans-European Nature Network](#)” in support of one of the key targets of the Strategy, based on [work done with ETC Urban Land and Soil with ETC/BD contribution](#). This cross-cutting approach paves the way towards new integrated assessments in support of this ambitious goal.

## News from our partners

### ETC/BD and the COVID-19 pandemic

As everyone in Europe and around the world, ETC/BD partners were affected by the spread of the COVID-19 pandemic and the unprecedented lockdown measures taken by most countries. Working from home in often suboptimal conditions, colleagues have pulled through to deliver the work program with only minor and occasional delays. This also spurred accelerated acculturation to online meetings, with ETC/BD’s first virtual management committee meeting in May. Due to the remaining uncertainty as well as the heterogeneity of situations across Europe, most meetings for the rest of 2020 are expected to be held online as well. As in many other organizations, this will certainly lead to rethinking the balance between traveling and online meetings as well as working from home and at the office. It also brings a new spotlight on our interactions with nature and the potential magnitude of the consequences of biodiversity loss on human societies.

### JNCC

The Spring 2020 edition of JNCC Nature News is now online:

<https://bit.ly/JNCCNatureNewsSpring20>

### **Promoting Citizen Science**

JNCC supports a number of long-term terrestrial biodiversity surveillance schemes, in partnership with



NGO’s and research bodies, and thousands of volunteer citizen scientist recorders. The schemes produce annual results, which are published as Official Statistics, which increases their credibility and impact. JNCC recently published Official Statistics for the UK Butterfly Monitoring Scheme (20/03) and the Wetland Bird Survey (02/04).

### **JNCC provides advice at the 13th CoP to the Convention on Migratory Species**

The Convention on Migratory Species (CMS) is a United Nations Convention which provides a global platform for the conservation and sustainable use of migratory animals and their habitats. The UK has been a signatory since 1985. Every three years Parties to the Convention meet to review its implementation and direction going forward through resolutions, decisions, and concerted actions. The latest Conference of Parties (CoP) took place between 17 and 22 February, in Gandhinagar, Gujarat, India. James Williams and Alison Littlewood from JNCC provided science advice as part of the UK delegation.

### MNHN

### **The Parc Zoologique de Paris welcomes birth of endangered clouded leopard**

Captive breeding for the clouded leopard is rare! This kitten was born on March 1 and her parents (the female Luang and male Samar) are a happy couple who have reproduced for the fourth time.



After having been secluded in her den to allow time to bond with her mother, the 4 month old has started exploring her surroundings and can be visited by the public.



WENR

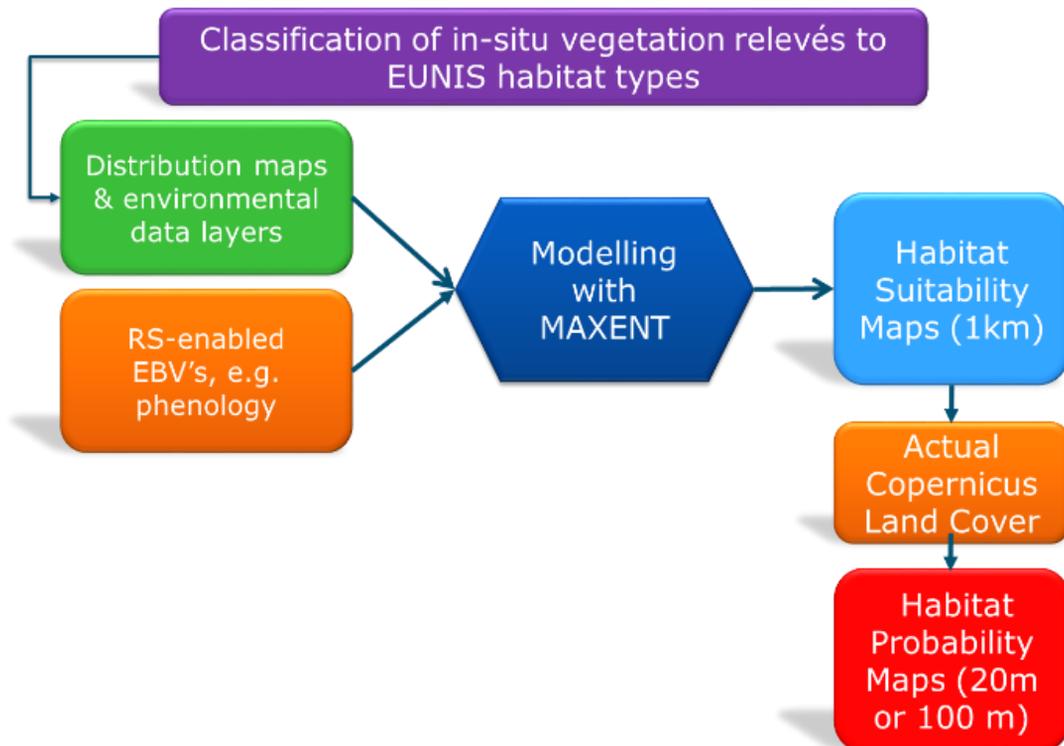
**Modelling the spatial distribution of EUNIS habitat types on a European scale**

Under several contracts with the EEA up to now the EUNIS habitats for grasslands, scrubs, forests, wetlands and vegetated man-made habitats have been revised, which resulted in clear descriptions of the habitat types, next to lists of indicator species, and cross links with the [European Vegetation Classification](#), and distribution maps. All the vegetation plot data were derived from the [EVA database](#), the European Vegetation Archive with over 1,5 million vegetation plots, which is constantly improved and extended by many vegetation scientists all over Europe. Under the flag of ETC/BD, partner Wageningen Environmental Research has used the distribution map of each EUNIS habitat type as a starting point to create a habitat suitability map, and in a subsequent step the habitat probability map based on actual Copernicus land cover information.

**Habitat suitability maps**

Habitat suitability maps are modelled grid-based maps indicating the suitability per grid cell, with values varying from 0 to 1. For the habitat suitability modelling, the latest version of the widely used software [Maxent](#) for maximum entropy modelling of species geographic distributions was used. Maxent is a general-purpose machine-learning method with a simple and precise mathematical formulation and has a number of aspects that make it well-suited for species distribution modelling, when only presence (occurrence) data, but not absence data are available. Because EUNIS habitats have a particular species composition, they are assumed to respond to specific ecological requirements, allowing to generate correlative estimates of geographic distributions.

Figure 1: Flowchart of the methodology implemented to obtain habitat suitability and probability maps





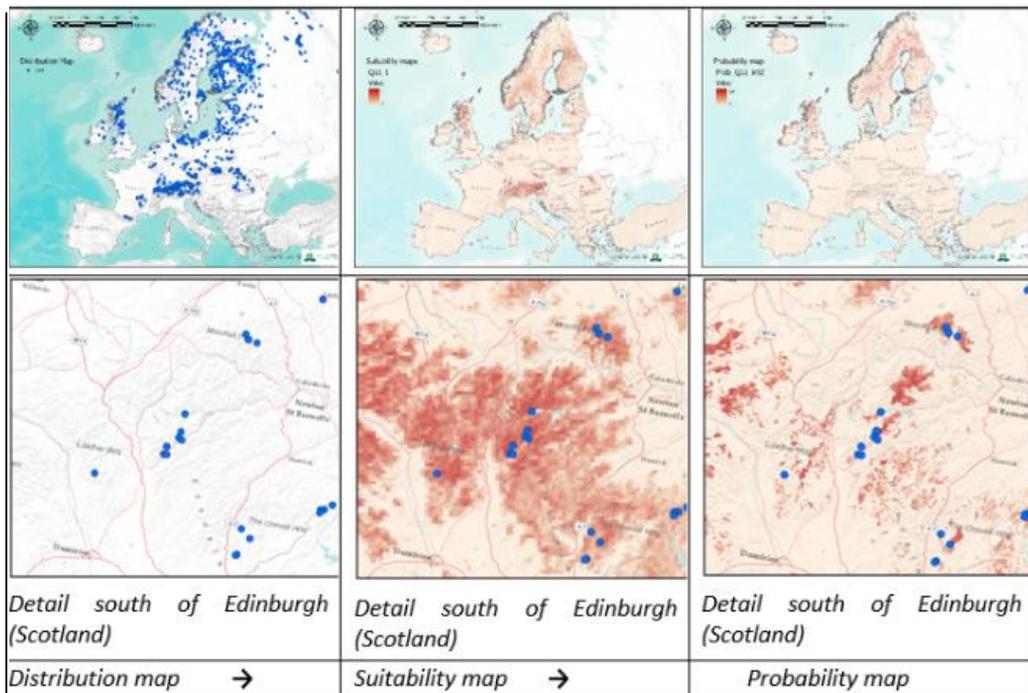
Modelling habitats that have been floristically defined is a well-known procedure for ecological modelling at local scales, and a promising technique to be applied at the continental level. The Maxent modelling procedure considers presence data (known observations of a given entity) and the so-called background data. Background data comprise a set of points used to describe the environmental variation of the study area according to the available environmental layers, like climate and soil parameters. It is assumed that these layers represent well the most important ecological gradients on a European scale. The layers were selected from meaningful environmental predictors commonly used for modelling non-tropical plant and vegetation diversity that are not mutually strongly correlated. In addition to climate and soil predictors also recently so-called RS-enabled EBV's (Remote Sensed Essential Biodiversity Variables; predictors based on remote sensing data), such as Phenology, flooding regime, Vegetation height and Land Cover have been included in the modelling process.

It is assumed that by using additional meaningful predictors such as the RS-enabled EBV's, the modelling will result in more realistic suitability maps with less outliers (prediction in areas where the habitat is not expected to be present).

### Habitat probability maps

The habitat probability maps are created by downscaling the habitat suitability maps with a 1km resolution by the actual land cover with a spatial resolution between 20 and 100 meters. The Copernicus land cover databases that have exploited for this purpose were the Copernicus High Resolutions Layers, e.g. Forest, Grassland, Water and Wetness, and the Corine Land Cover database. The specific relationship between land cover and the European habitats was investigated by overlaying the distribution data with the land cover maps to provide additional decision rules if needed. In principle the habitat probability maps are a refinement of the habitat suitability maps on basis of the actual Copernicus land cover data.

Figure 2: Overview of the various products as part of the methodology to obtain habitat probability maps. Example of Q11 (Raised bogs)





## Publications

### Effects of Natura 2000 on nontarget bird and butterfly species based on citizen science data



*Dryobates minor*



*Melitaea trivia*

This paper published in the journal *Conservation Biology* is based on the results of an ETC/BD project, using data on birds and butterflies collected by volunteers across Europe to examine the impact of the Natura 2000 network on species not targeted by the EU nature directives.

In almost half of the 155 bird species assessed, and particularly among woodland specialists, abundance increased as the proportion of landscape covered by Natura 2000 sites increased. This positive relationship existed for 27 of the 104 butterfly species, although most butterflies were generalists. Although the N2000 network supports high abundance of a large spectrum of species, the low number of specialist butterflies with a positive association with the N2000 network shows the need to improve the habitat quality of N2000 sites that could harbor open-land butterfly specialists.

Pellissier, V., Schmucki, R., Pe'er, G., Aunins, A., Brereton, T., Brotons, L., Carnicer, J., Chodkiewicz, T., Chylarecki, P., del Moral, J., Escandell, V., Evans, D., Foppen, R., Harpke, A., Heliölä, J., Herrando, S., Kuussaari, M., Kühn, E., Lehtikoinen, A., Lindström, Å., Moshøj, C., Musche, M., Noble, D., Oliver, T., Reif, J., Richard, D., Roy, D., Schweiger, O., Settele, J., Stefanescu, C., Teufelbauer, N., Touroult, J., Trautmann, S., van Strien, A., van Swaay, C., van Turnhout, C., Vermouzek, Z., Voříšek, P., Jiguet, F. & Julliard, R. (2020). Effects of Natura 2000 on nontarget bird and butterfly species based on citizen science data. *Conservation Biology*: 34(3) pages 666-676

<https://conbio.onlinelibrary.wiley.com/doi/abs/10.1111/cobi.13434>

### ETC/BD Technical Papers and Working papers

The ETC/BD and its predecessors have produced many reports over the past 25 years. A selection of these reports is now available on our website in the [ETC/BD Technical papers and Working papers section](#).

ETC/BD reports are also coming to Zenodo, the open-access European repository, in a dedicated community curated by EEA: [the European topic centre knowledge hub](#).



Spring in the Jardin des Plantes, MNHN (Photo by M-C. Moses)

*This newsletter is produced twice a year.*

*If you have any contributions for the next issue of this newsletter, please forward them to Muriel Vincent ([muriel.vincent@mnhn.fr](mailto:muriel.vincent@mnhn.fr))*

*Visit our website at:*

<https://www.eionet.europa.eu/etcs/etc-bd>

*The current European Topic Centre on Biological Diversity (ETC/BD) is a partnership of 11 organisations led by the Muséum national d'Histoire naturelle (MNHN) under a framework contract with the European Environment Agency (EEA) which runs from January 2019 until the end of 2021.*

[MNHN](#) [Ecologic](#) [ILE-SAS](#) [INCC](#) [NATURALIS](#)  
[NCA-CR](#) [S4E](#) [SLU](#) [UBA](#) [URJC](#) [WENR](#)