



EARSC Statement

Nature Restoration Law

The European Association of Remote Sensing Companies ([EARSC](#)) is a trade association based in Brussels, representing the European downstream services sector. EARSC counts more than 135 members across 25 countries of Europe.

EARSC shares the global ambition to reduce and reverse biodiversity loss in the framework of the [UN Convention on Biological Diversity](#), the [2030 Agenda of Sustainable Development](#) and supports the objectives of the [EU's Biodiversity Strategy for 2030](#) being a comprehensive, ambitious and long-term plan to protect nature and reverse the degradation of ecosystems.

In that framework, EARSC welcomes the European Commission's consultation on the [Nature Restoration Law](#) with the objective to restore ecosystems, habitats and species across the EU's land and sea areas. The legal proposal for a Nature Restoration Law is a huge opportunity to bring nature back to Europe, benefiting biodiversity, climate, and people alike. To make significant progress in turning the tide of biodiversity loss by 2030, the restoration targets should be data focus, evidence driven and easy to implement which will require proactive and continuous monitoring of progress towards the goals and objectives outlined in the upcoming regulation.

Earth observation (EO) satellites can observe what happens on Earth from space; this includes land, sea, water, atmosphere, and human activities. Effective monitoring of biodiversity requires the use of multiple types of data such as satellite derived data from public and private missions which together with in situ data and models, data processing and analytics, offer new opportunities to track biodiversity changes.

The implementation of the regulation will require from Member States to commit to important targets to restore biodiversity and the provision of relevant information to effectively monitor progress towards the biodiversity indicators, and the degree of compliance with the regulation. Earth Observation data and value-added services offer today the unrivalled objectivity and transparency (wide-scale and consistent across the entire globe providing dependable measurement systems) necessary to monitor and assess the health of ecosystems. These insights can inform national priorities and help determine the most effective paths for action on national biodiversity issues.

Notably, available [Copernicus](#) and commercial Earth Observation data together with existing value-added services¹ already provide actionable data to act upon time-bound restoration targets such restoration of **terrestrial**², **coastal**³, **freshwater**⁴ and **marine**⁵ ecosystems, restoration of **peatlands**⁶, **wetlands**⁷, **natural connectivity**⁸ of rivers and natural functions, **agricultural**⁹ and **forest**¹⁰ ecosystems.

- Biodiversity information to allow monitoring of changes in the area extend as well as identifying threats and damages. Land cover/land use classification and maps provide much of the environmental data used in species distribution modelling that estimate overall the biodiversity and how it is changing which can characterise ecosystem functioning, assists in ecosystem service assessment, ecosystem productivity and health, biodiversity inventories.

¹ Case examples from ESA implementation projects and EO service industry:

² Estimate forest productivity to assess forest health, quantify forest ecosystem condition (resilience to drought), estimate potential distribution of invasive species

³ Mapping pelagic biodiversity, intertidal habitat mapping, impact of anthropogenic pressures

⁴ Impact of eutrophication on the water quality of shallow lakes and their biodiversity, impact of changes in water temperature and heat waves on freshwater fish diversity, water occurrence frequency maps

⁵ Measure of the extend of seagrass meadows and assess their changes over time

⁶ Conservation and restoration of peatlands

⁷ Detect changes in wetlands habitats, derive trends, assess threats, and estimate impacts

⁸ Monitoring changes in river connectivity due dams and impact on biodiversity, hydrologic and hydraulic modelling, changes in river discharge

⁹ Spatial information on identified abandoned areas, temporal information on the timing of the change event, spatial information on end crop season

¹⁰ Forest ecosystem monitoring and invasive species detection, identify potential areas for forest restoration, estimate forest productivity to assess forest health, forest fire recovery trajectory

- Daily and historical information based on rich Earth Observation data time series to understand the dynamics of change and enable before-after comparisons: i.e. timeseries to address of any plot of land, at any point in time these changes such forest degradation or monitoring of the intra-annual and inter-annual variations of surface waters, in extent and volume (water surface elevation, extent, frequency and variations).
- Information in near real-time for timely decision making. Daily imagery allowing the identification of changes and small-scale events where activity signs can disappear fast, such as selective logging.
- Harmonized information by transforming valuable global data into geoinformation services, providing a common reference for due diligence reporting and oversight, the production of European habitat suitability maps, the integration of EO products within habitat modelling

Satellite derived data is a critical source for monitoring and driving progress against biodiversity. It is a foundational tool providing objectivity, repeatability, global coverage, data continuity, affordable, thematic detail. By observing the Earth from space, we can help analysing major knowledge gaps on biodiversity and vulnerable terrestrial, marine and freshwater ecosystems. Consequently, EARSC believes that the Nature Restoration Law should specify that satellite derived data and added-value services are operational solutions to gain a broad understanding of what is happening on our Earth from space (asking questions about how biodiversity change, why the biodiversity is changing or what are the consequences for that change) and contribute to taking appropriate measures to achieve the Biodiversity Strategy. EARSC remains at your disposal to work together on this objective.