

## Biodiversity Climate Service (BioClim)

In the last decades, Europe has invested massively in the acquisition, generation, and storage of large amounts of environmental data, using information stemming from satellites, in-situ measurements, and climate model output. Through the Copernicus programme, these data are now being made available on a central platform, the Climate Data Store.

At the same time, considering the growing concerns regarding the impacts of climate change, professionals in a range of sectors increasingly feel the need to access climate information. However, this is not straightforward, as the raw data are often not suitable for direct use, among others requiring a dedicated processing to suit specific sectors.

The Copernicus Climate Change Service will be offering a unique opportunity to access and use the data contained in the Climate Data Store, by implementing operational climate services within it for a number of sectors. This will be done in a such manner that users – who are experts in their field but not necessarily in the manipulation of climate data – can easily obtain relevant information for subsequent use in their own operations.

**The *Biodiversity Climate Service (BioClim)*, as a part of the Copernicus Climate Change Service (C3S), is going to contribute to this effort by providing new climate information, tailored to the needs of the biodiversity and ecosystem services communities.**

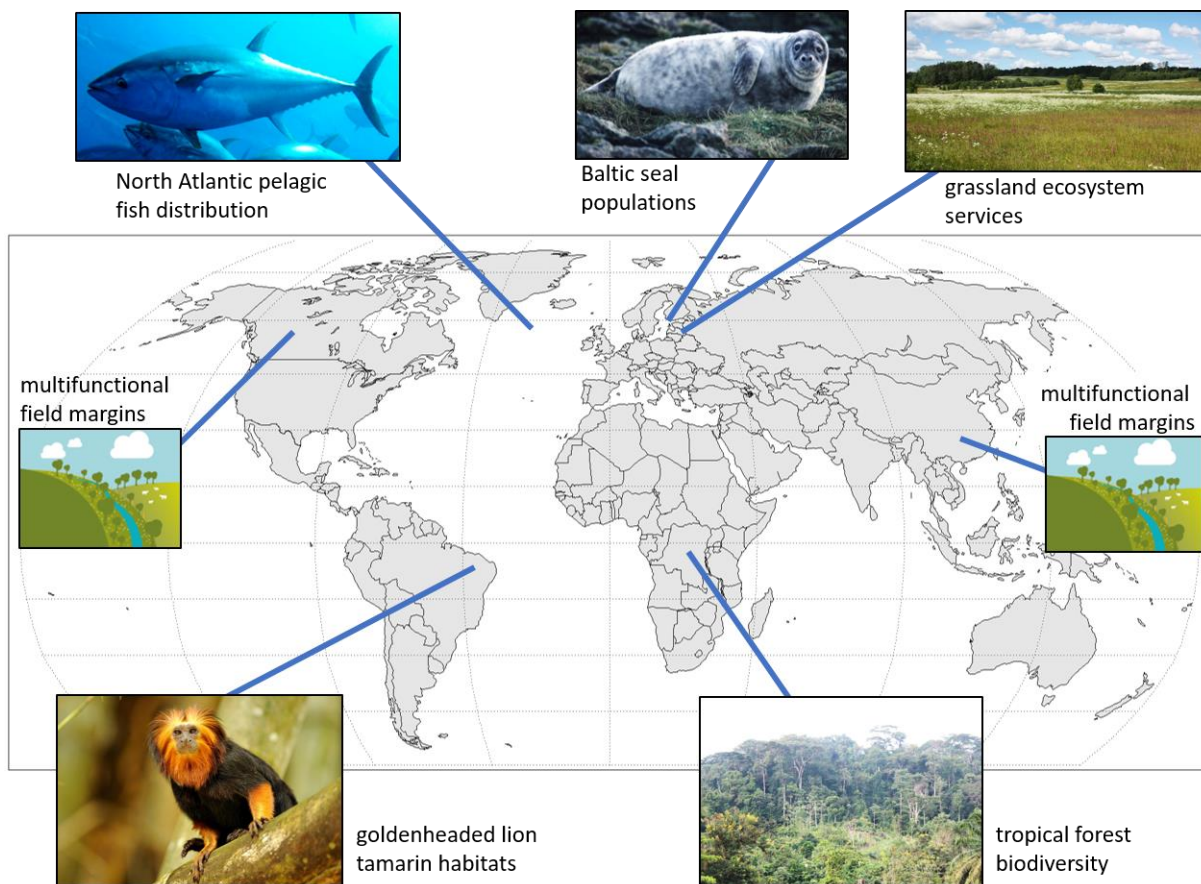
Surely, biodiversity is increasingly under pressure from climate change, the latter affecting the habitat suitability of a large number of species, and the efficiency of ecosystem services. The management of these issues, for instance through restoration or species migration measures, is often hindered by a lack of appropriate information regarding future climate envelopes.

To address this, BioClim is going to develop bespoke climate-biodiversity indicators, delivering novel evidence regarding impacts of past, present, and future climate, and thus providing support to decision making challenges that are currently facing unmet climate data needs.

The operational Biodiversity Climate Service is conceived as a generic platform, containing data and tools that are flexible enough to serve as wide as possible a range of user profiles. It will be developed, tested and demonstrated through six concrete use cases, as follows (also see figure on next page):

- habitat suitability of golden-headed lion tamarins under climate change in Brazil;
- seasonal forecast of pelagic fish distributions in the North Atlantic;
- northern Europe grassland management practice under climate change;
- seal reproduction and habitat use with changing ice conditions in the Baltic Sea;
- climate change resilience of multifunctional field margins (China, Canada);
- tropical forest/tree biodiversity in Central Africa.

Between them, these use cases cover fauna and flora, the terrestrial as well as the marine biosphere, biodiversity and ecosystem services, and different climate zones across the globe. They also come with a variety of end-users, including nature conservation agencies, policy makers, plantation owners, and private companies.



*The Biodiversity Climate Service is built by VITO (Belgium) together with topical experts in the domains of biodiversity and ecosystem services.*

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