LIFE APEX

Systematic use of contaminant data from apex predators and their prey in chemicals management

The AIM of LIFE APEX is to improve systematic use of chemical monitoring data from apex predators and prey for protecting human health and the environment.

Chemical monitoring data from **apex predators** (e.g. raptors, otters, seals) are of particular value; their position at the tops of food webs means they act as **sentinels** to reveal harmful substances, in terrestrial, freshwater and marine environments. When combined with data from selected prey (e.g. fish), apex predator data can deliver useful **quantitative information on the persistence and bioaccumulation.** LIFE APEX will make use of novel analytical methodologies that allow for **screening of several thousands of chemical substances** in each sample and **prioritization of frequently occurring pollutants and their mixtures**.

LIFE APEX involves making **better and more cost-effective use of chemical monitoring data from the large, valuable but under-used resource of environmental samples** in Europe's Environmental Specimen Banks, Natural History Museums and other research collections.

LIFE APEX **responds to needs of regulators for specific regulatory applications** in relation to REACH and the Biocidal Products Regulation.

The **OBJECTIVES** of LIFE APEX are:

1. **To demonstrate four novel, regulatory applications of chemical monitoring data from apex predators and prey,** specifically:
   a) to detect presence of chemical contaminants in the environment;
   b) to facilitate selection of most relevant substances for further hazard assessment;
   c) to assess impact and effectiveness of substance risk mitigation measures;
   d) to define predominant chemical mixtures in the environment.
2. **To support and sustain regulatory take-up of these applications**, specifically:
   a) to assess relevant resources and capacities for replication and transfer and engage key partners;
   b) to enhance quality assurance of sampling, processing, archiving and analysis of food web samples (and resulting data);
   c) to enhance availability and access to relevant apex predator and prey samples and related chemical monitoring data and the comparability and interoperability of this data.
3. **To replicate and transfer** LIFE APEX approaches and methods with partners across Europe.
4. **To disseminate and communicate** the LIFE APEX approaches and methods and in particular optimize uptake by regulators and industry.

Project duration: 4 years (September 2018 to August 2022)

Project budget: €3.35 M (of which EU LIFE funding 60%)

Consortium partners: Environmental Institute (Slovakia) - Coordinator; Natural Environment Research Council (United Kingdom); German Environment Agency (Germany); Naturalis Biodiversity Center (Netherlands); University of Athens (Greece); University of Florence (Italy); Fraunhofer IME (Germany).

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