OSIRIS

osiris-fis.org

Collecting for our Future

Open Science, Information, and Research Infrastructure

Speakers: Bernhard Misof (LIB Bonn & Hamburg)
Johannes-Geert Hagmann (DM Munich)

Biological, technical and cultural collections curated by leading research institutions play a crucial role in times of uncertainty, disinformation and instability. They are **repositories of knowledge about nature, culture and technology**, and as such invaluable to our understanding and development of the relationships and interactions between humans and the environment. our response to the most pressing global challenges.

Aim/Objective

The central aim of OSIRIS is to unite the most significant national collections from the natural sciences, technology and cultural history, including living collections, into a globally unique and openly accessible and integrated **knowledge infrastructure**. By using state-of-the-art digitisation technology, OSIRIS creates an inter- and transdisciplinary, networked knowledge space. OSIRIS will unleash **enormous potential for knowledge, action and thus transformation**, promote basic research and support transformation processes towards sustainable social developments.

With more than **160 million collection objects** and over **1000 experts**, 17 supporting organisations and partner institutions, OSIRIS is arguably the largest research infrastructure in Europe. We are thus setting new standards for the indexing and utilisation of collection knowledge. As a **consortium, network and research infrastructure**, OSIRIS is committed to the principles of open science, global knowledge networking and integrity and ethics in science and technology.

Products and services for research, innovation and transfer

OSIRIS offers:

- Analysis and modelling of **socio-ecological systems** at all scales to derive sustainable solutions.
- Development of **knowledge-based guidance and action** and its transfer to society, business and politics.
- Targeted **design of sustainable human-environment relationships** and **promotion of open knowledge economies**.

Contribution to strengthening Germany as a centre of innovation and economical development

As part of OSIRIS, we develop pioneering technologies and encourage partnerships between science and industry. Specifically, these include:

- Developing **cross-collection data formats, databases and AI-supported analysis methods** for interdisciplinary use.
- Deriving **innovative economic assessment logics** from the analysis of human-environment relationships.
- Promotion of **public-interest partnerships** through the use of OSIRIS.
- Creation of an **innovation-promoting environment** that supports technology and knowledge transfer.

Supporting the sovereignty, resilience and capacity to act

OSIRIS strengthens digital and technological sovereignty and provides an evidence-based decision-making basis for tackling complex societal challenges. Key approaches include:

- Development and transfer of **knowledge based guidance and action** through inter- and transdisciplinary formats.
- Creation of concrete **recommendations for action** with the involvement of relevant stakeholders.
- Development of **scenarios for a sustainable future** based on extensive collection data.
- Networking with **international knowledge infrastructures** to strengthen global knowledge equity.

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Social impact

OSIRIS promotes social change through open knowledge economies, participation and innovative research approaches::

- for the targeted **design of sustainable human-environment relationships**.
- by integrating **Citizen Science and Community Science** to strengthen societal participation in knowledge creation
- by combining interdisciplinary research with **practical problem-solving**.
- by **promoting digital transformation** and lifelong learning programmes.

Measures and project priorities

- **Mass digitisation of collection objects**, distributed data storage, integration of AI and new technologies into collection management.
- Development of an **OSIRIS data platform with a virtual research environment** that utilises open standards, enables seamless interdisciplinarity and creates an interface to the EOSC (European Open Science Cloud) and Cultural Heritage Cloud (ECCCH).
- **Development of interdisciplinary and transdisciplinary laboratories** in which new solutions for sustainable development are developed together with relevant stakeholders.
- Creation of a joint, inter-institutional **governance structure for collections** and their sustainable further development.
- Establishment of a '**School of Collections**' to train future generations of researchers and collection managers and to promote new approaches to science communication.

Homepage: https://osiris-fis.org/