EIRENE RI

www.eirene.eu

MUNI | RECETOX

www.recetox.muni.cz

RESEARCH NEEDS AND OPPORTUNITIES IN AFRICA

Jana Klánová on behalf of RECETOX and EIRENE

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40 years on the path towards a healthy future
MUNI | RECETOX
40 LET YEARS
For four decades, the RECETOX Centre has studied the complex relationship between humans and the environment, building knowledge and understanding about the environmental and health risks linked to toxic substances to create a healthier, safer, and more sustainable future for all.
Living Laboratory
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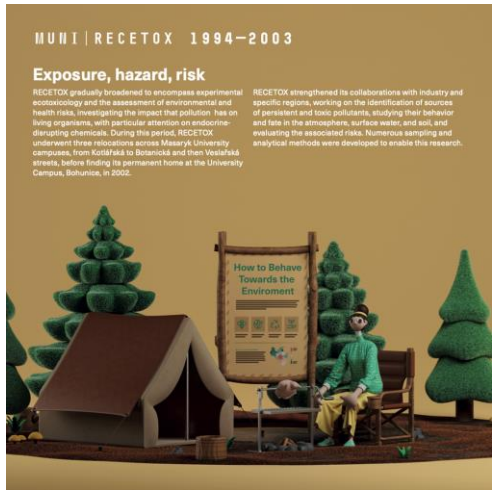
MUNI | RECETOX 1983–1993
Pollution
The origins of RECETOX can be traced back to 1983 when the Faculty of Science established a Department of Environmental Protection. The department focused on the ecological impacts of human activities and the risks associated with environmental pollution. Quickly, the department developed partnerships with industrial entities and regions impacted by environmental pollution, building expertise in the assessment of environmental conditions and design strategies for improvement.
Since 1988, RECETOX has collaborated with the Czech Hydrometeorological Institute and, to this day, jointly conducts comprehensive environmental pollution monitoring at Košetice. The collected data are used to model trends and anticipate risks effectively. Additionally, RECETOX initiated collaboration with the European Monitoring and Evaluation Programme, supporting the Convention on Long-range Transboundary Air Pollution by providing expert insights into air quality issues.
Measurement of External Influences on Humans


MUNI | RECETOX 1994–2003
Exposure, hazard, risk
RECETOX gradually broadened to encompass experimental ecotoxicology and the assessment of environmental and health risks, investigating the impact that pollution has on living organisms, with particular attention on endocrine-disrupting chemicals. During this period, RECETOX underwent three relocations across Masaryk University campuses, from Kotlářská to Botanická and then Veslařská streets, before finding its permanent home at the University Campus, Bohunice, in 2002.
RECETOX strengthened its collaborations with industry and specific regions, working on the identification of sources of persistent and toxic pollutants, studying their behavior and fate in the atmosphere, surface water, and soil, and evaluating the associated risks. Numerous sampling and analytical methods were developed to enable this research.
How to Behave Towards the Enviroment


MUNI | RECETOX 2004–2013
Safety
During this period, participation in European framework programme projects, the implementation of the INCHEMBIOL research project and the first CETOCOEN project, financed from the European Structural and Investment funds, were instrumental to the development of RECETOX. These projects also contributed to establishing interdisciplinary teams with the Departments of Chemistry and Experimental Biology of the Faculty of Science and later with St. Anne's University Hospital.
Since 2006, RECETOX has organized an annual international summer school, a tradition that continues to this day. The National Centre for Toxic Substances, established in 2006, is a unit that continues to support the Czech government and ministries in implementing international conventions on the protection of health from toxic substances. Plus, in 2009, RECETOX was designated as a Regional Centre for Capacity Building and Technology Transfer by the United Nations Environment Programme (UNEP).
Smarter and healthier city


MUNI | RECETOX 2014–2023
Human health
Environmental, social, and genetic factors collectively determine the health of individuals. Studying the complex interactions among these factors necessitates long-term population studies. A focus on assessing health impacts and risks associated with environmental exposures has driven the expansion into new research avenues, including the establishment of population studies and the development of laboratory and biobanking capacities.
We have established a biobank capable of preserving hundreds of thousands of biological samples. Further, we have successfully undertaken several significant European research endeavors, including Widening projects such as TEAMING, ERA Chair, and Twinning; coordinate the pan-European ESFRI Research Infrastructure EIRENE, and have been awarded with the designation as a World Health Organization Collaborating Centre for Chemical Exposure and Risks.

EIRENE RI

40 years on the path towards a healthy future

MUNI | RECETOX 40 LET YEARS

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CETOCOEN Excellence

MUNI · FNUSA ICRC · UCL · ETH zürich · BBMRI-ERIC

Teaming for a healthy future

Mission

Building a healthy future with environmental, economic and social sustainability and improved well-being.

Sustainable societies

We research smart technologies and provide innovative solutions enabling communities to thrive.

Healthy planet

We conserve the planet for future generations by combating global environmental challenges.

Human well-being

We investigate factors affecting the development of chronic health conditions and generate new tools for diagnosis and treatment.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857560

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Brno Living Lab

Partnership for a healthy future

MUNI · FNUSA ICRC · jihomoravský kraj

We collaborate to build a community that works together towards a healthy future. We form research partnerships with academic institutions and university hospitals and reach out to local businesses, regional and state authorities to share knowledge. We engage with citizens and welcome them to join our community to co-create positive change.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 857560

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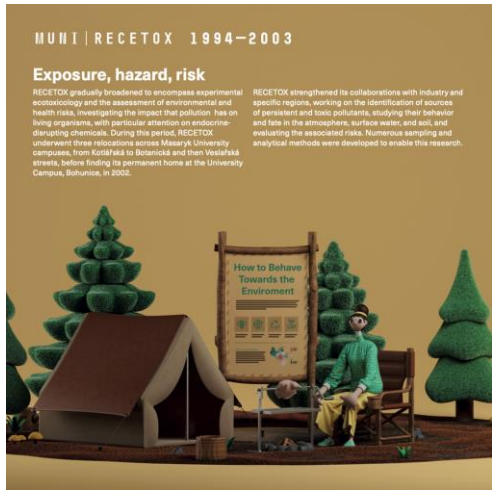
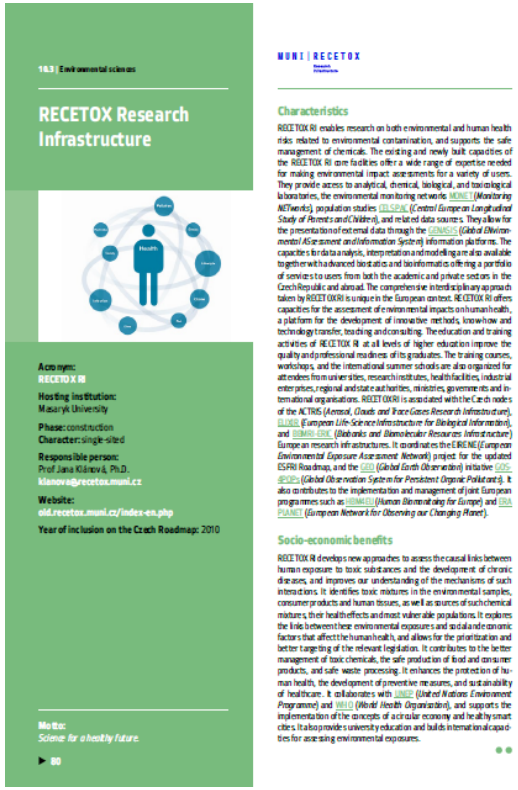
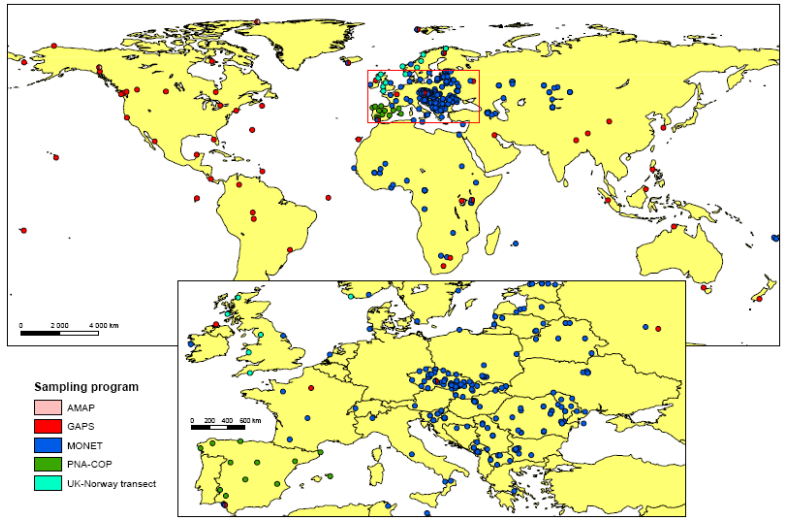
RECETOX: STOCKHOLM CONVENTION REGIONAL CENTRE FOR CAPACITY BUILDING AND TECHNOLOGY TRANSGFER

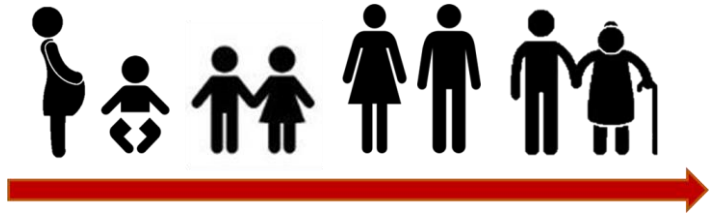


RECETOX: WHO- COLLABORATING CENTRE

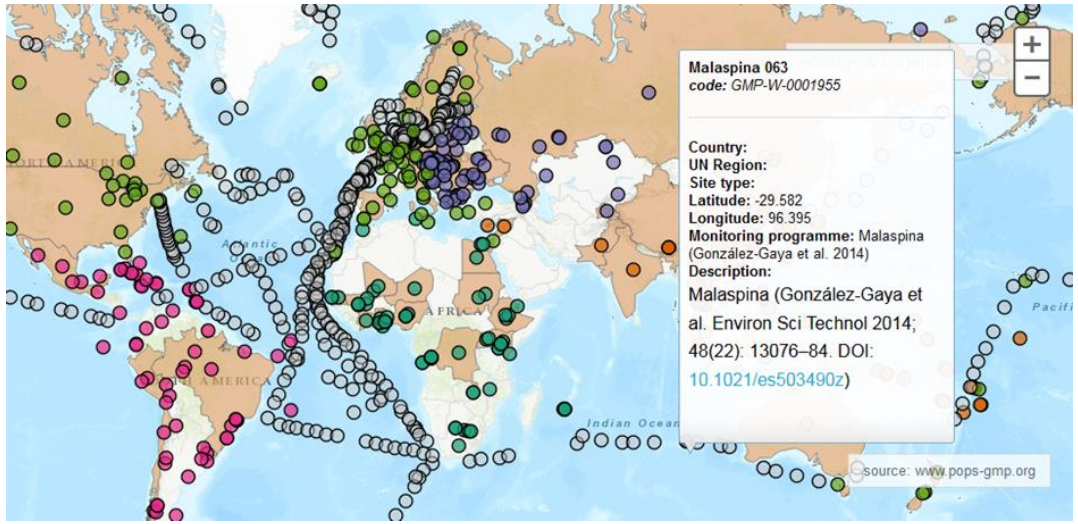
RECETOX RI in the national roadmap since 2012





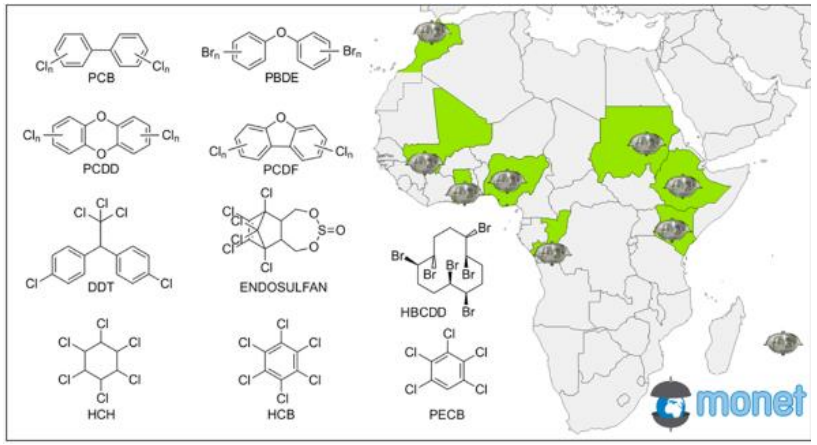


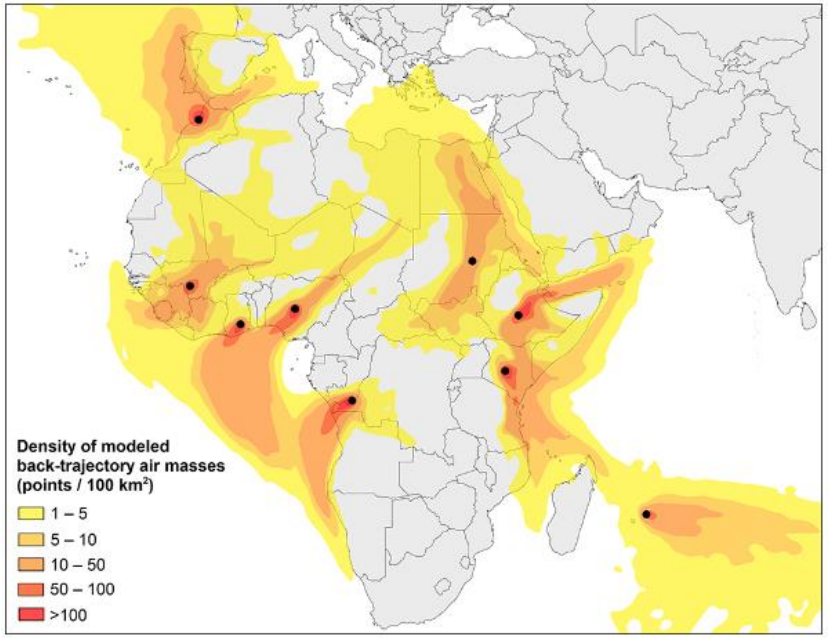
MONET monitoring networks
CELSPAC population studies
RECETOX accredited trace laboratories
GENASIS information platforms

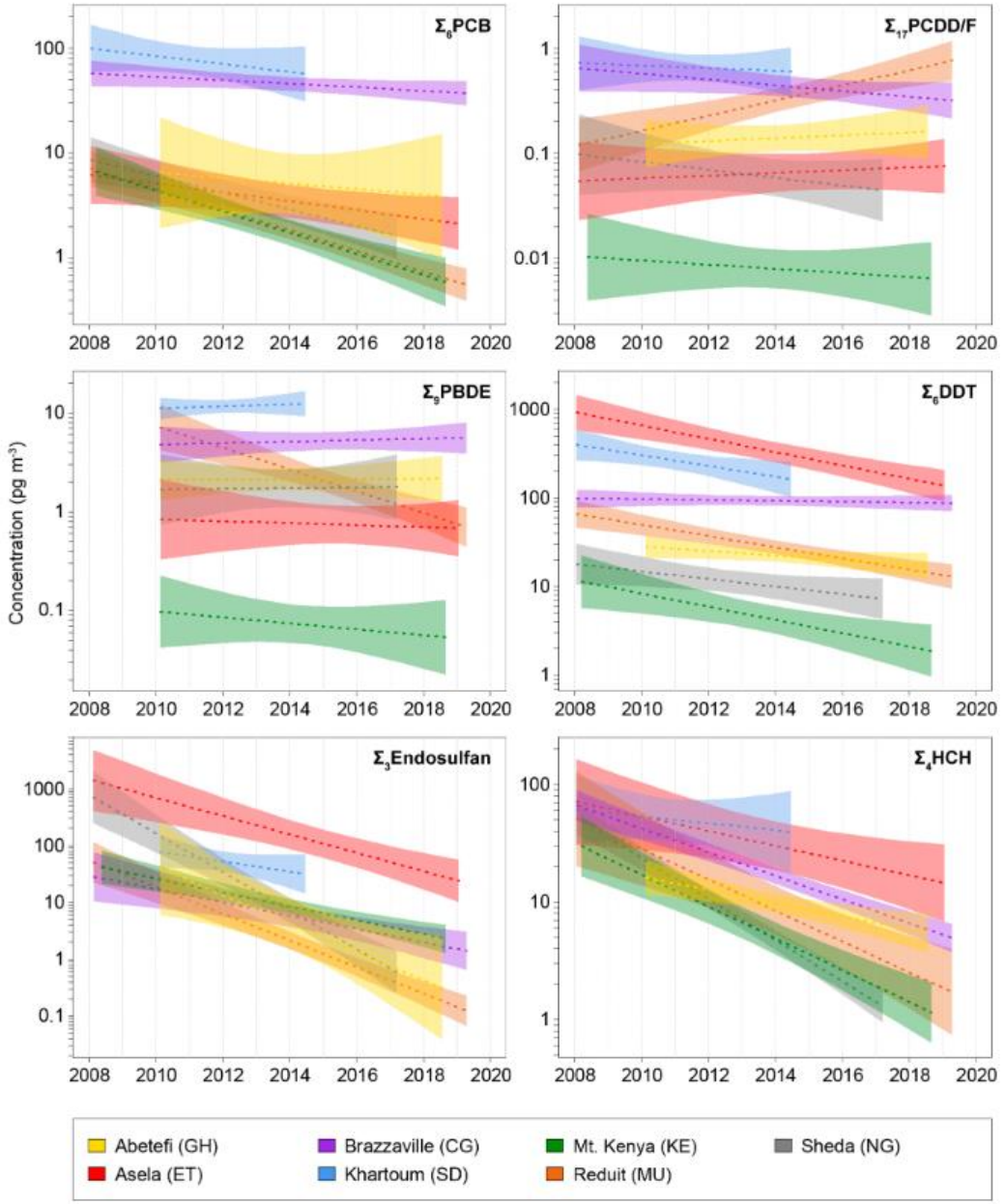


EIRENE RI

Temporal Trends of Persistent Organic Pollutants across Africa

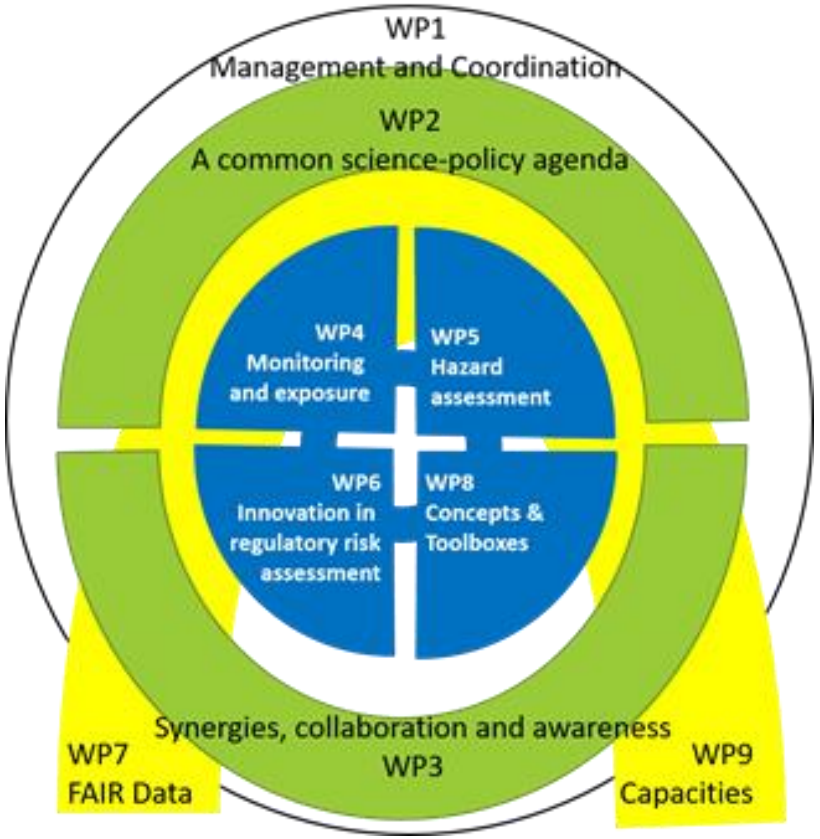


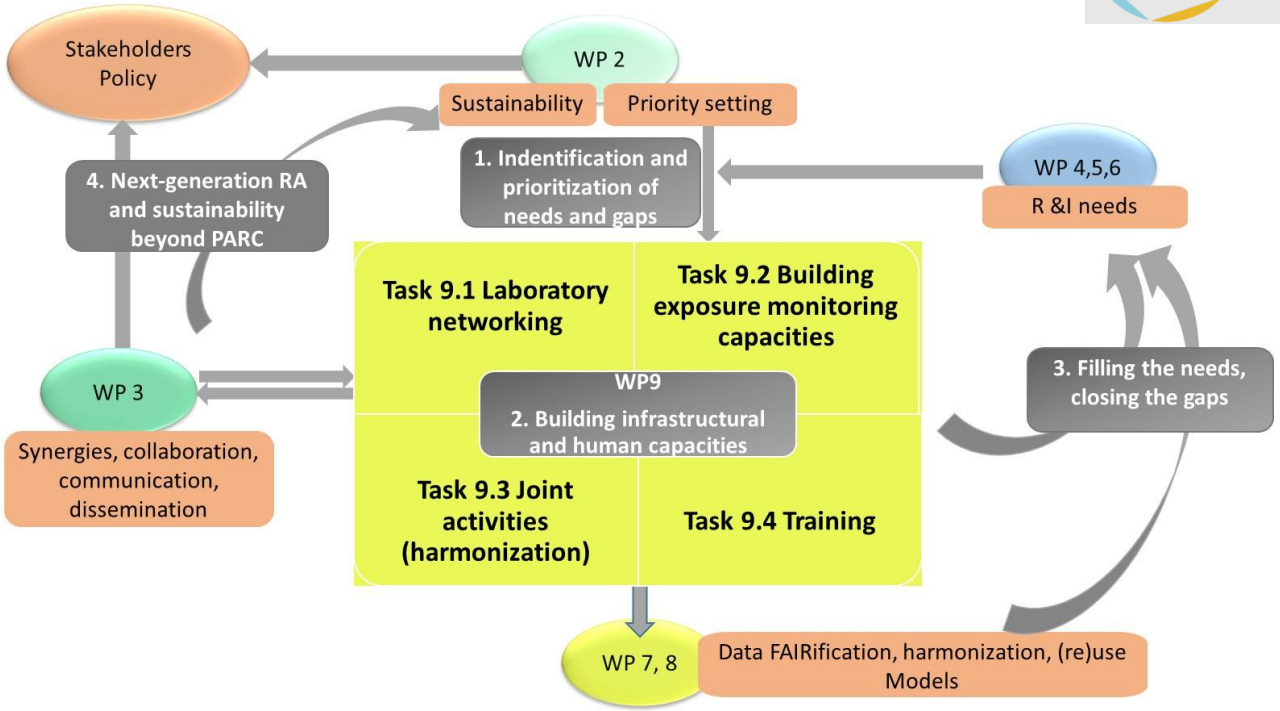




https://pubs.acs.org/action/showCitFormats?doi=10.1021/acs.est.0c03575&ref=pdf

Partnership for Assessment of Risks from Chemicals (PARC)





VISION: Building infrastructural and human capacities in PARC

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EIRENE RI: Prioritised in the 2021 ESFRI Roadmap

EIRENE RI

Research Infrastructure for EnvIRonmental Exposure assessmeNt in Europe

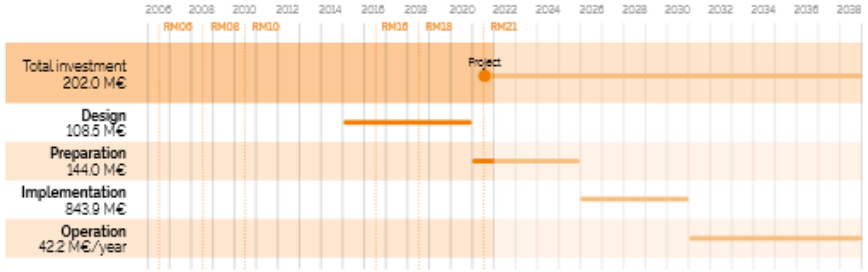
Website	Headquarters	Legal status	Type
pending	Masaryk University Brno, Czech Republic	pending	distributed

DESCRIPTION

The Research Infrastructure for EnvIRonmental Exposure assessmeNt in Europe (EIRENE RI) pioneers the first European Research Infrastructure on environmental determinants of human health, the Human Exposome. EIRENE RI intends to support large-scale research for the interdisciplinary assessment of environmental determinants of health, including indoor and outdoor environment factors, lifestyle, socioeconomics, and the individual's ability to cope with various stressors such as infection or disease. EIRENE RI will provide harmonised workflows and integrated services for data and sample collection, as well as knowledge and tools that will be made accessible to academic researchers, private companies, public authorities and citizens through the EIRENE open-access system and the EIRENE knowledge hub.

The concept of a pan-European Infrastructure supporting research on the effects of long-term exposures to various types of stressors on population health and the roles these exposures play in the development of chronic diseases is based on ten-year experience of Czech national RECETOX RI. Entered in the ESFRI Roadmap 2021, EIRENE RI already connects 50 research institutions from 17 countries. It builds on the legacy of the European environmental monitoring networks and their databases (EMEP, GMP, GMOS), GEO Initiatives (GOS4POP and GOS4M) and related H2020 projects (ERA PLANET, e-SHAPE), EU biomonitoring initiatives (DEMOCOPHES, HBM4EU), UNEP/WHO global biomonitoring efforts, EU exposome (HELIX, EXPOSOMICS, HEALS and EHEN cluster) and other related projects (HERA, EURION cluster).

TIMELINE & ESTIMATED COSTS



INTERCONNECTIONS

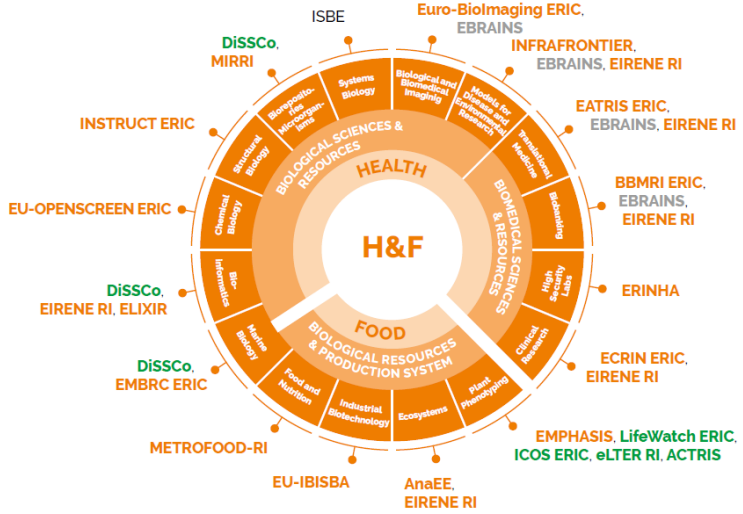
POLITICAL SUPPORT

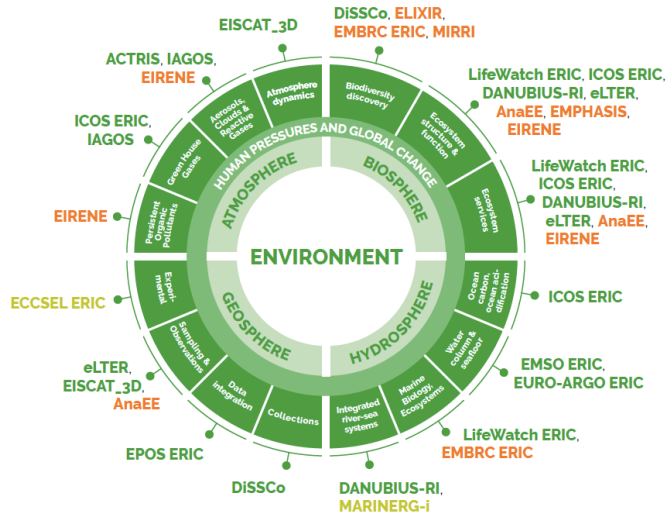
Lead
CZ

Prospective member
AT, BE, DE, EL, ES, IS, IT, NL, SK

Members

- **Austria, Belgium, Czechia, Italy, Netherlands**
- Germany, Greece, Island, Slovakia
- France, Norway, Sweden
- Finland, Slovenia, Spain, UK, US
- Cyprus, Denmark, LX, Portugal
- Australia
- EMBL/EBI





EIRENE RI

history

culture

architecture

science

BRNO
city for life

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