Priority Research Area (PRA): NatBio

Nature-based Solutions, **Bio**diversity and Climate change

The **Priority Research Area (PRA) – NatBio** focuses on cutting-edge research in biodiversity, environmental protection, and climate change. This initiative promotes interdisciplinary, comprehensive, and ambitious projects aimed at preserving nature, reversing ecosystem degradation, and fostering a sustainable and healthy coexistence between humans and the natural environment. The research agenda aligns with the **Biodiversity Strategy**, emphasizing efforts to restore biodiversity for the benefit of people, the climate, and the planet.

The thematic scope of the NatBio project covers nature-based solutions**,** including sustainable ecosystem management, innovative conservation technologies, and strategies to enhance the quality of water, soil, and air. It also extends to renewable energy sources (RES), green chemistry, microbiology, and agriculture**,** ensuring a holistic approach to environmental challenges. Another key focus is on the impact of biodiversity on human, animal, and plant health, as well as the mitigation of environmental pollutants such as e.g. nanoplastics, heavy metals, drugs and hormones residues, etc.

Additionally, NatBio addresses climate change in terrestrial and aquatic environments**,** disaster risk reduction, and strategies to combat global warming. The initiative integrates artificial intelligence (AI) solutions for environmental protection and evaluates the role of Environment, Social, and Governance (ESG) strategies in shaping sustainable policies at national, regional, and organizational levels.

Bringing together experts from diverse disciplines NatBio aims to develop innovative, science-based solutions to contemporary environmental challenges.

Primary disciplinary targets:

biology, geography, earth and environmental sciences, veterinary, agriculture, chemistry, physics, health science, sociology, psychology, archeology, economics, management and law, mathematics, political science and administration, security studies, social and economic geography and spatial management

Thematic range:

Nature-based solutions

- development and implementation of activities to protect, sustainably manage and restore natural and modified ecosystems for the benefit of people and nature;
- new solutions and technologies in nature conservation;
- healthy ecosystems for human health;
- water, soil and air;
- renewable energy sources (RES);

- microorganisms, plants, animals
- epigenetics;
- green chemistry;
- food quality and security;
- sustainable biofuels and bioenergy.

Biodiversity

- biodiversity and its influence on human, animal and plant health;
- environmental pollution, e.g. nanoplastics, drugs and hormones residues, etc.
- nature protection and restoration in terrestrial and aquatic areas considering specific habitats and species;
- protection for areas of high biodiversity and climate value;
- enhancing support for pro-environmental actions.

Climate

- climate change in terrestrial and aquatic environments;
- preventing and mitigating the effects of natural disasters;
- people, animals and plants in a changing climate;
- mitigating global climate change;
- AI solutions for the environment protection;
- Environment, Social, and Governance (EGS) strategies of countries, regions and organizations;
- stakeholders in environmental protection and climate change.