

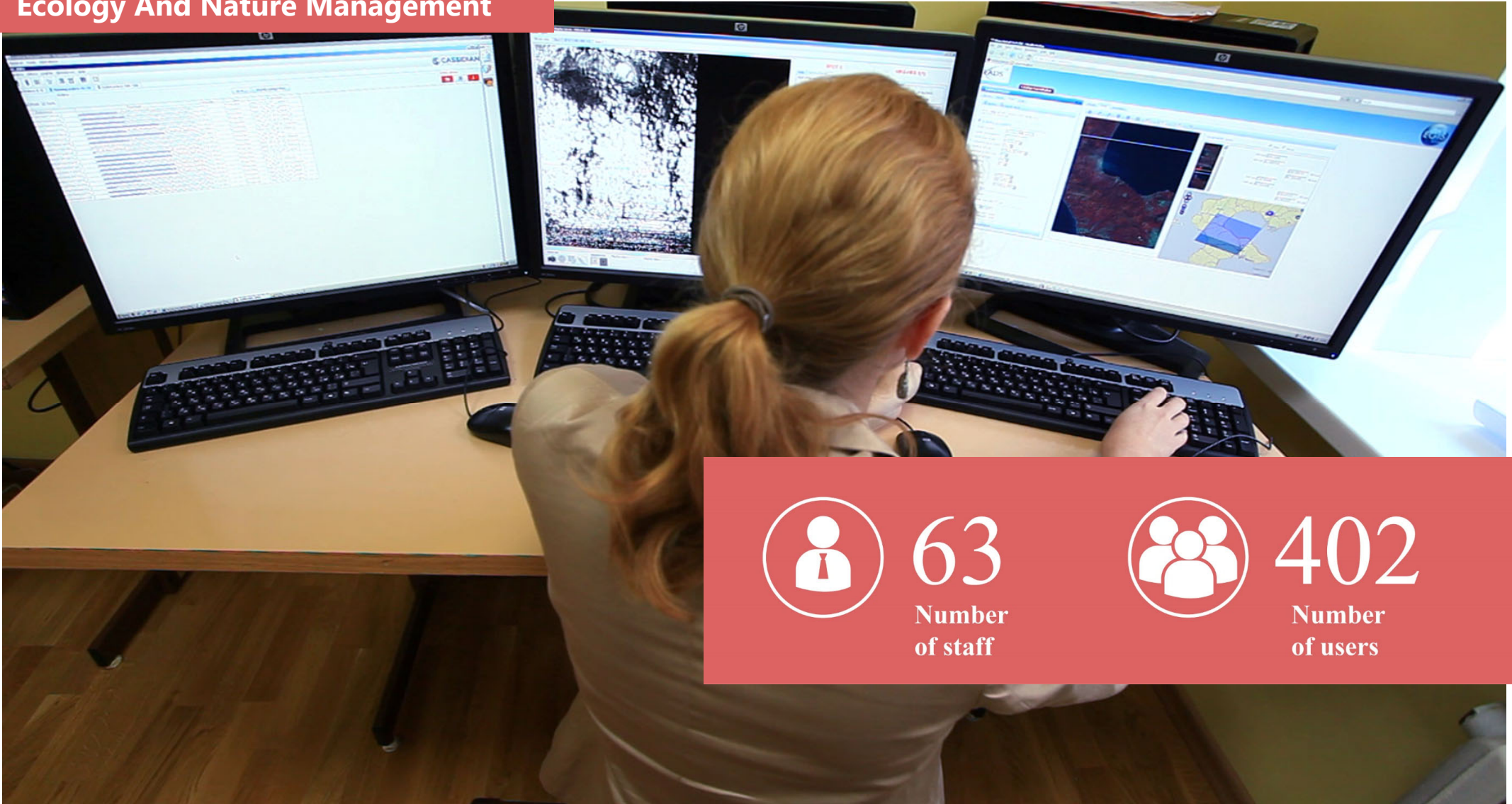
2 RESOURCE CENTERS



ECOLOGY AND NATURE MANAGEMENT

- Centre for Geo-Environmental Research and Modelling (GEOMODEL)
- Environmental Safety Observatory

Ecology And Nature Management



63

Number
of staff



402

Number
of users

Ecology And Nature Management



297

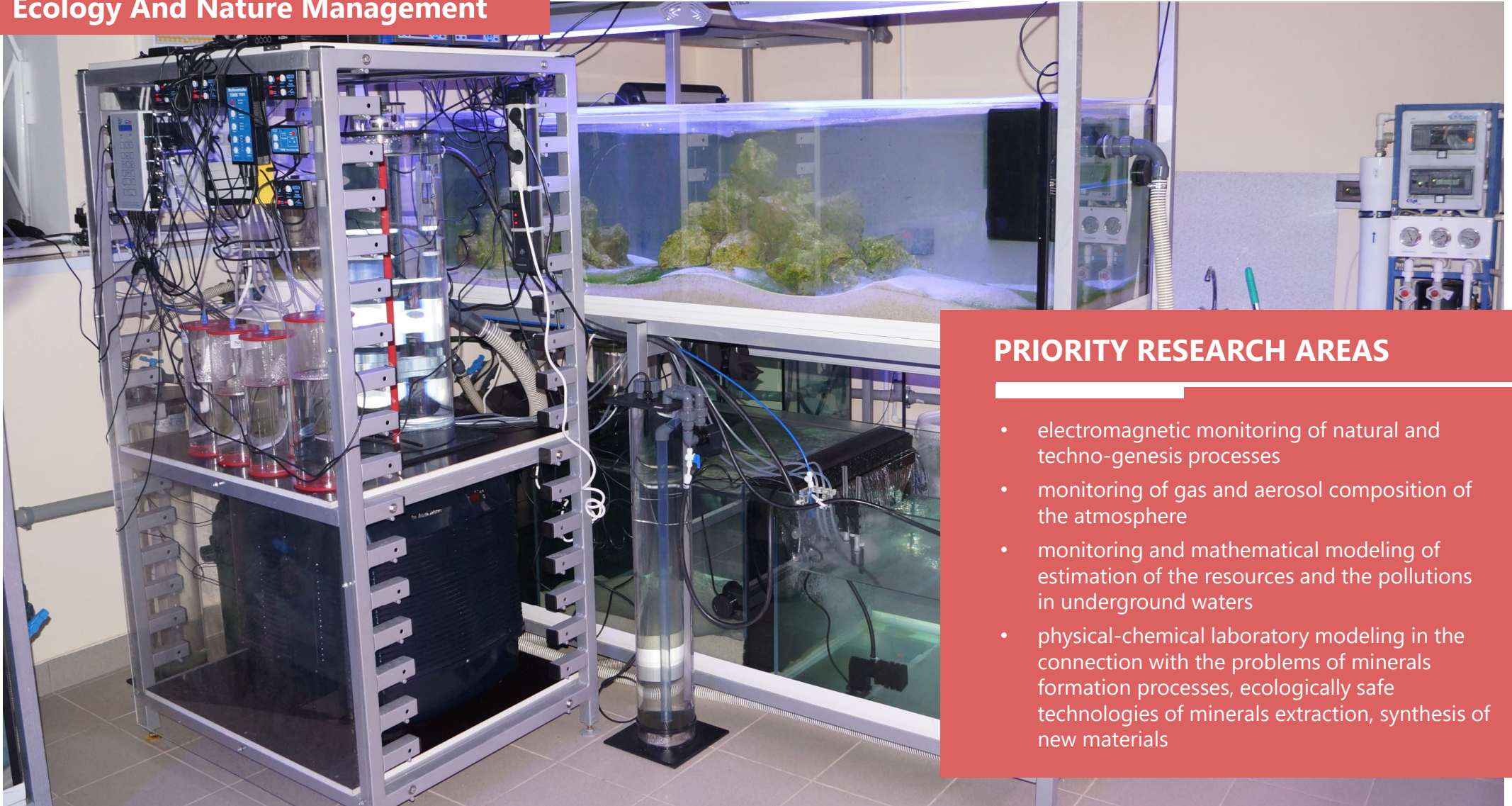
Number
of projects in 2015



587

Number
of projects in 2016

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PRIORITY RESEARCH AREAS

- electromagnetic monitoring of natural and techno-genesis processes
- monitoring of gas and aerosol composition of the atmosphere
- monitoring and mathematical modeling of estimation of the resources and the pollutions in underground waters
- physical-chemical laboratory modeling in the connection with the problems of minerals formation processes, ecologically safe technologies of minerals extraction, synthesis of new materials

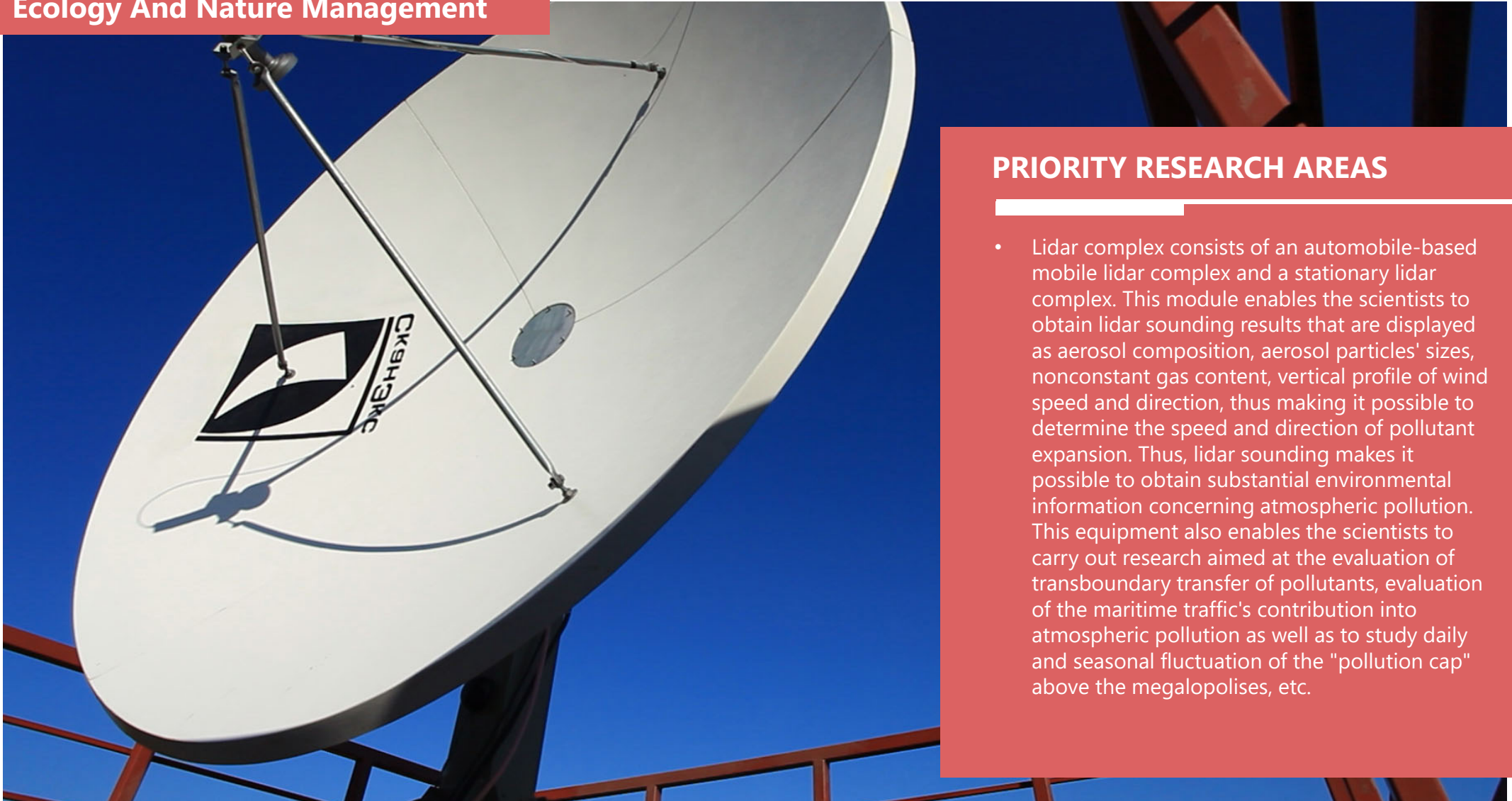
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PRIORITY RESEARCH AREAS

- The centre's equipment makes it possible to study various types of pollution (atmosphere, natural and anthropogenic waste water, soil), evaluate the toxicological hazard of natural and anthropogenic waste water using the methods of biology (optical bioelectronic systems), study biological fluids, extracts from plants' and animals' tissues as well as particular types of biomolecules used for environmental testing and evaluation of environmental pollution.
- Bioelectronic complex This equipment is used for fundamental research in environmental physiology, ecotoxicology of benthos invertebrates as well as for evaluation of the biological effects of human impact on water ecosystems. The application of biological methods helps objectively evaluate the level of toxicological hazard of natural and biopurified wastewater on a real time basis. Aquarium complex allows keeping aquatic animals polar, temperate and tropical zones

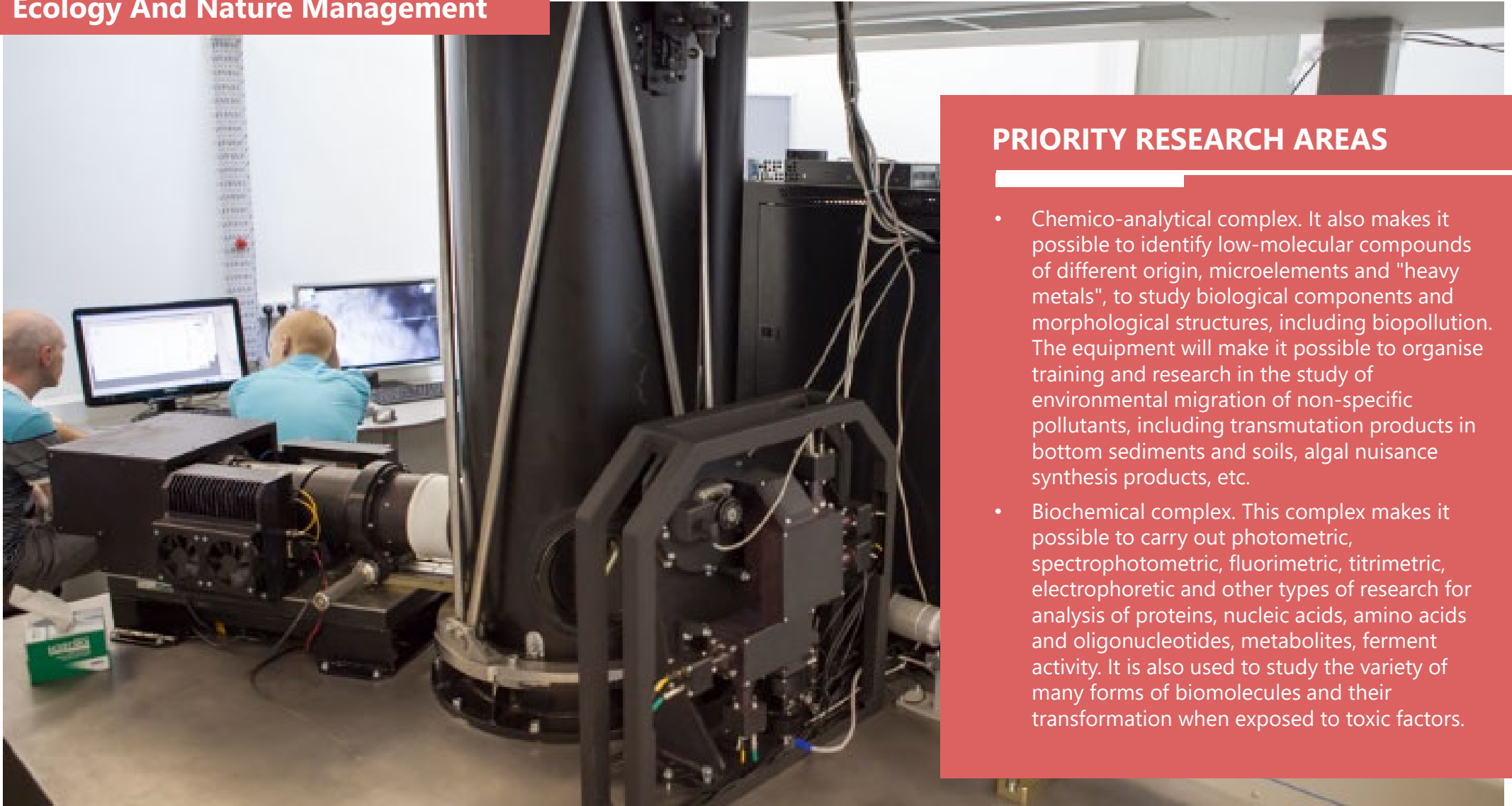
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PRIORITY RESEARCH AREAS

- Lidar complex consists of an automobile-based mobile lidar complex and a stationary lidar complex. This module enables the scientists to obtain lidar sounding results that are displayed as aerosol composition, aerosol particles' sizes, nonconstant gas content, vertical profile of wind speed and direction, thus making it possible to determine the speed and direction of pollutant expansion. Thus, lidar sounding makes it possible to obtain substantial environmental information concerning atmospheric pollution. This equipment also enables the scientists to carry out research aimed at the evaluation of transboundary transfer of pollutants, evaluation of the maritime traffic's contribution into atmospheric pollution as well as to study daily and seasonal fluctuation of the "pollution cap" above the megalopolises, etc.

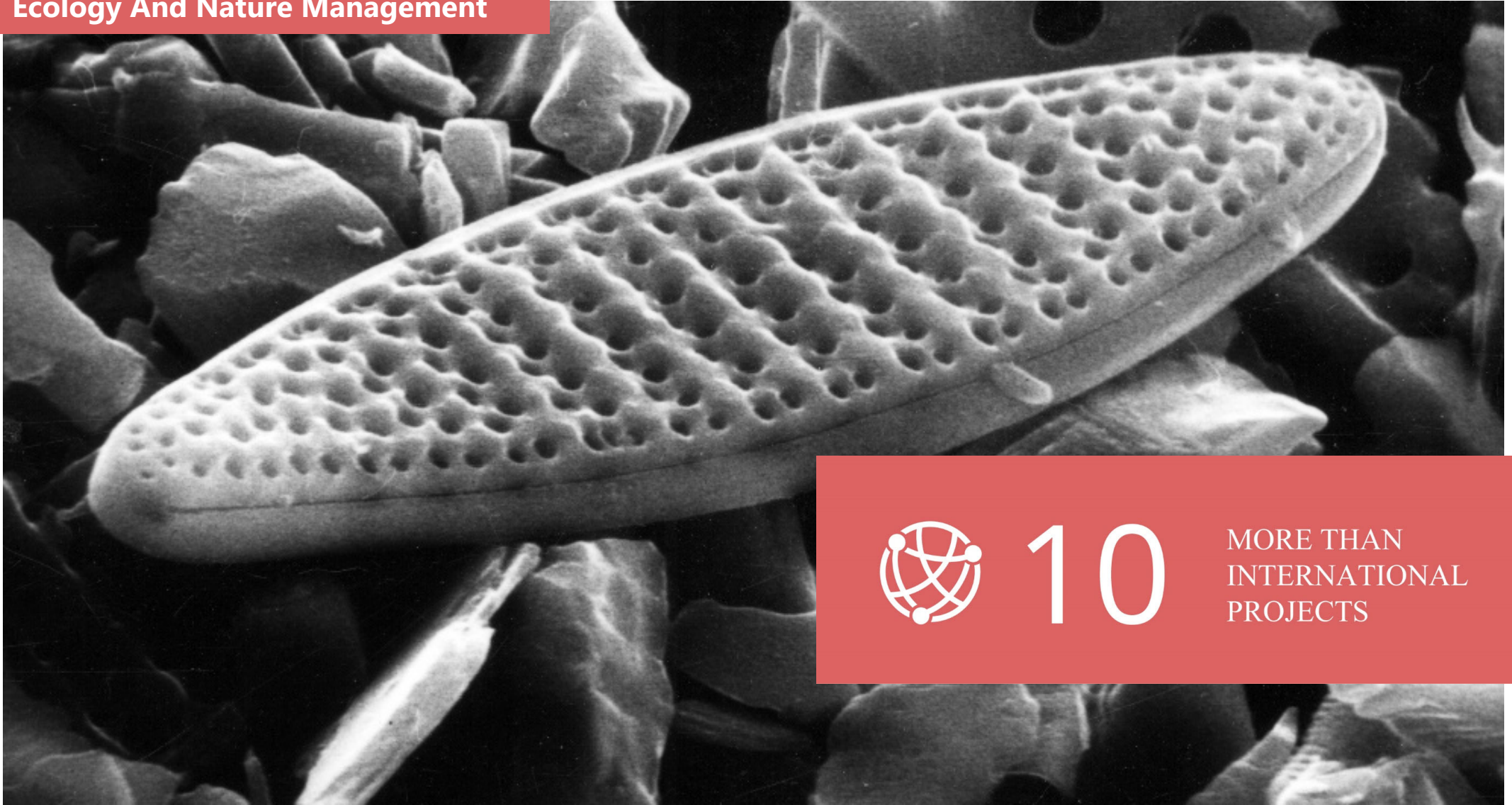
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PRIORITY RESEARCH AREAS

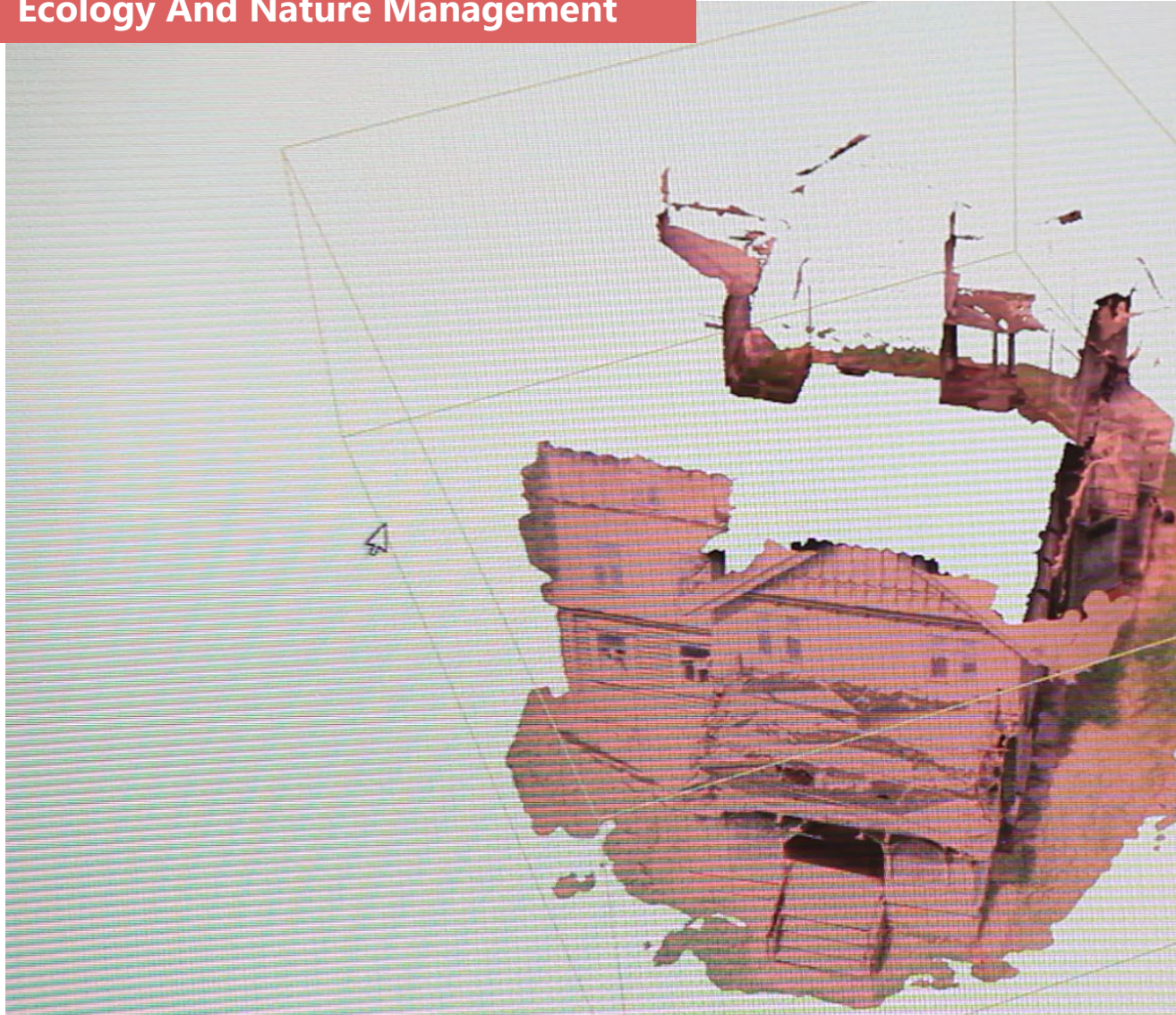
- Chemico-analytical complex. It also makes it possible to identify low-molecular compounds of different origin, microelements and "heavy metals", to study biological components and morphological structures, including biopollution. The equipment will make it possible to organise training and research in the study of environmental migration of non-specific pollutants, including transmutation products in bottom sediments and soils, algal nuisance synthesis products, etc.
- Biochemical complex. This complex makes it possible to carry out photometric, spectrophotometric, fluorimetric, titrimetric, electrophoretic and other types of research for analysis of proteins, nucleic acids, amino acids and oligonucleotides, metabolites, ferment activity. It is also used to study the variety of many forms of biomolecules and their transformation when exposed to toxic factors.

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MORE THAN
INTERNATIONAL
PROJECTS

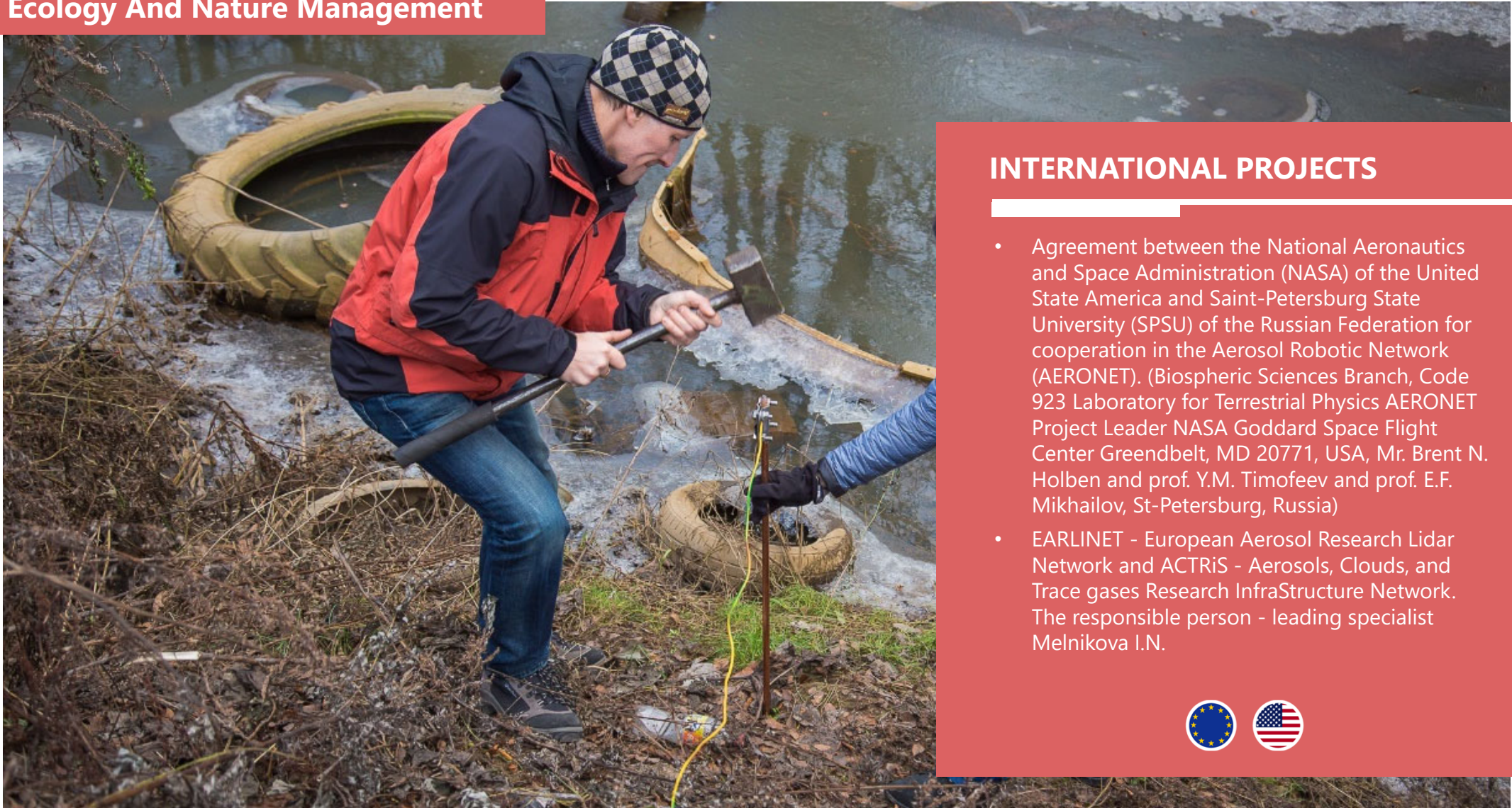


INTERNATIONAL PROJECTS

- "Consultancy Services for Design, Construction & Supervision of Laetoli State of the Art Museum" between Peter Rich Architects – GMP Consulting Engineers – Laetoli JV (Arusha, Tanzania) and Raw Materials Research Laboratory (Anatoly N. Zaitsev, St. Petersburg, Russia)
- Zotino Tall Tower Observatory (ZOTTO) research project (prof. M.O. Andreae and prof. U. Pöschl, Mainz, Germany and prof. Eugene F. Mikhailov, St-Petersburg, Russia)
- Amazonian Tall Tower Observatory (ATTO) research project (prof. P. Artaxo and prof. H. Barbosa, Sao Paulo, Brazil and prof. Eugene F. Mikhailov, St-Petersburg, Russia)
- PEEX (Pan Eurasian Experiment) (prof. M. Kulmala, Helsinki, Finland and prof. Eugene F. Mikhailov, St-Petersburg, Russia)



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INTERNATIONAL PROJECTS

- Agreement between the National Aeronautics and Space Administration (NASA) of the United State America and Saint-Petersburg State University (SPSU) of the Russian Federation for cooperation in the Aerosol Robotic Network (AERONET). (Biospheric Sciences Branch, Code 923 Laboratory for Terrestrial Physics AERONET Project Leader NASA Goddard Space Flight Center Greenbelt, MD 20771, USA, Mr. Brent N. Holben and prof. Y.M. Timofeev and prof. E.F. Mikhailov, St-Petersburg, Russia)
- EARLINET - European Aerosol Research Lidar Network and ACTRiS - Aerosols, Clouds, and Trace gases Research InfraStructure Network. The responsible person - leading specialist Melnikova I.N.

