

Institute of Environmental Protection – National Research Institute

Established in 1986



INSTYTUT OCHRONY ŚRODOWISKA – PAŃSTWOWY INSTYTUT BADAWCZY
INSTITUTE OF ENVIRONMENTAL PROTECTION – NATIONAL RESEARCH INSTITUTE

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National Research Institute

Research profile

The current activity of the Institute focuses on the following research fields:

- :: comprehensive environmental research, including degradation processes and their consequences;
- :: environmental policy and environmental protection strategies, programs and plans;
- :: air protection,
- :: climate change;
- :: noise control;
- :: landscape conservation;
- :: protection of biodiversity;
- :: protection and restoration of biologically active land surface;
- :: protection of water resources and their quality;
- :: waste management;
- :: management of chemicals in the environment.

Activity scope

Among the basic research areas of special significance are projects aimed at assessing the risk associated with intentionally produced substances like biocides and pesticides that are introduced into the basic components of the environment – water, soil, air and living organisms in a controlled way, as well as substances which are introduced in an uncontrolled way as by-products of many production processes, like dioxins, PCBs, PAHs and heavy metals. The findings of research concerning persistent organic pollutants and pollution with heavy metals allow to develop remedial methods for restoring degraded areas, with a special focus on areas degraded by chemicals.

In cooperation with other Polish partners the Institute is involved in the

preparation of a strategy for reducing greenhouse gas emissions and the adaptation of the Polish economy to climate change, preparing the first integrated climate change scenarios for Poland. Recently, the Institute has developed the methodological basis for adaptation to climate change of plant production on farms representing different types of management and production scales.

Some projects are carried out on a permanent basis. Most of these are applied research studies for the Ministry of the Environment. Projects on environmental quality monitoring, including air pollution, noise and lakes, as well as integrated monitoring of the natural environment, and economic issues of climate change are of special importance.

Research in the area of water, sewage and sludge management has been an important part of the Institute's activity, with much attention paid to physical, chemical and biological properties of sludge, in particular sanitary research on human and animal intestinal parasites, bacteria causing hemolysis and Salmonella due to the frequent agricultural use of sludge as fertilizers.

Microbiological air contamination and the spreading of odors are important research fields assessing the impact of municipal facilities such as wastewater treatment plants and landfills on the environment and human health. Research on waste management, including the management of sewage sludge, leads to cooperation with the industry as well as small and medium enterprises.

The Institute's share in research projects conducted as part of EU programs is increasing significantly. The Institute has been working on projects dealing with the reduction of dioxin emissions from the metallurgical sector, and has been involved in the development of innovative chemical safety indicators and environmental indicators enabling integrated risk assessments in the context of accidental releases of hazardous chemical substances into the environment, and integrated assessments of the

ecological state of waters, as well as projects related to ecosystems' adjustment to climate change.

Since 2005, the National Administrator of the Emissions Trading System has been set up in the Institute. In 2009 it transformed within the structure of the Institute into the National Centre for Emissions Management (KOBIZE). As defined in Article 3.2 of the Law on the Emissions Management System of 17 July 2009 KOBIZE is responsible inter alia for:

- :: operation of the national system of emissions balancing and forecasting of GHG and other substances, including the national database of emissions to the air;
- :: maintaining the national registry of the Kyoto units;
- :: preparing emissions reports and forecasts;
- :: establishing methodology of setting up emissions' levels for categories of installations or industrial activities, as well as methodology of establishing emission factors per product unit, fuel or material used;
- :: collecting, processing, estimating, forecasting and collating data on the volume of emissions of GHG and other substances.

The Institute operates two environmental monitoring stations – in the Borecka Forest: Integrated Environmental Monitoring Station “Puszcza Borecka”, and in Warsaw: Air Pollution Measurement Station (in collaboration with US EPA).

Three accredited laboratories support the Institute's R&D projects. Namely: the Environmental Monitoring Laboratory works in the area of chemical and physical analyses of the quality of basic components of the environment; the Mobile Acoustics Laboratory conducts research on industrial, traffic, aircraft and impulse noise; the Borecka Forest Station for Integrated Environmental Monitoring conducts, inter alia, measurements of concentrations of ozone and other pollutants. ::

**Instytut
Ochrony
Środowiska –
Państwowy
Instytut
Badawczy**

Headquarters:

ul. Krucza 5/11d
00-548 Warszawa
ul. Kolektorska 4
01-692 Warszawa

Branch unit

ul. Wybrzeże
Wyspiańskiego 39e
50-370 Wrocław

National Centre for Emissions Management (KOBIZE):

ul. Chmielna 132/134
00-805 Warszawa

www.ios.gov.pl