

Passion for Environmental Protection

Jan Skowronek, Ph.D., director of the Institute for Ecology of Industrial Areas (IETU) in the southern city of Katowice, Silesia province, talks to Ewa Dereń.

What is the main business of your institute?

The institute was established in 1972 after the World Health Organization (WHO) and the United Nations Development Program (UNDP) chose Poland's Silesia province as a research area for an environmental protection project. Silesia was a good testing ground for the project because it suffered from excessive environmental pollution at the time. A special Environmental Protection Center was set up in Katowice to carry out the project. The project resulted in developing many innovative tools for environmental management in industrial and urbanized areas within the Upper Silesian Industrial Region. The center also played the role of a training center for interns and grant holders from UN agencies in Europe and Asia. Parallel to projects carried out as part of the UNDP/WHO agenda, in 1973 the center began developing collaboration with the U.S. Environmental Protection Agency.

Subsequently the Environmental Protection Center became part of the Institute for Environmental Protection, which was ultimately turned into the Institute for Ecology of Industrial Areas. The Institute for Ecology of Industrial Areas has been an independent research and development center since 1992.

As soon as it became an independent organization, the institute signed direct agreements on cooperation with the U.S. Department of Energy, the Florida State University, as well as its first European agreement—with the Norwegian Institute for Air Research. These agreements resulted in many joint projects.

We conducted all our research with our American partners in accordance with U.S. procedures in force in the 1990s. This experience in social communication and environmental management came in handy when we began working on EU projects, since these projects also require regular cooperation with end users.

We recently completed a project financed by the U.S. Environmental Protection Agency under the Methane2Market Partnership program. The two-year project, called the Methane to LNG Żory Coal Mine Project, involved obtaining methane from a defunct hard-coal mine and using it as an eco-friendly fuel in the form of liquefied natural gas (LNG) on the domestic market, with a special focus on local users. Methane is a valuable source of energy, alongside coal and oil, especially as it generates little pollution per unit of energy produced.

Does the institute provide any services to businesses and industry?

The main job of the institute is to provide scientific research for the Ministry of the Environment. But we also provide environmental expert studies for various industries and business sectors. The institute offers advice and prepares reports for the Chief Inspectorate for Environmental Protection and the Ministry of the Economy as well as other central and local government bodies, as well as industrial companies from Poland and other EU countries. One example is the work of a team dealing with municipal waste management, which supervised the development of



Poland's first National Waste Management Plan. We prepared a similar plan for Silesia province, and for a number of towns and districts. At present the team is working on using biomass to generate "green" energy.

On the one hand, the institute offers scientific research services, research and development work and environmental protection expertise; on the other, it provides consulting services. Our research covers issues such as sustainable development of the environment as well as pollution and ways of assessing and eliminating its effects. We try to contribute to environmental policy making by improving environmental management methods.

As part of its range of consulting services, the institute prepares ecological reviews, environmental impact evaluations, waste management plans, environmental protection programs, assessments of bacteriological contamination

FACTFILE

The Institute for Ecology of Industrial Areas in Katowice leads the way in fostering a sustainable development of the environment in urban areas and industrial regions in Poland. The institute works with a number of leading research centers and environmental protection agencies around the world. Since Poland's European Union entry in 2004, the institute has carried out 41 EU research projects, to add to a record of previous undertakings with international partners.

of soil, and expert opinions on environmental and health risks, in addition to developing soil treatment technology.

The institute has a laboratory that is officially certified to test water, sewage, solid waste, soil and sediments. The results of this research are recognized in all EU countries. The institute runs two monitoring stations, one in Katowice, and the other in Brenna in the Beskid Śląski mountain range area. The Katowice station has been monitoring air pollution and precipitation quality since 1989. It is part of the National Network of Air Pollution Monitoring Stations and the State Environmental Monitoring System. In 1999, the station additionally became part of the European Air Quality Monitoring Network (EuroAirNet). The station in Brenna, on the other hand, conducts experiments on the influence of increased concentrations of ozone and UV-B on plant life.

Is the institute's environmental protection technology well known internationally?

The institute's innovative Air Pollution Identification System won a silver medal at the Brussels Innova exhibition of inventions, research and new technology in 2008. The invention also won a prize in the Innovation of the Year 2009 competition held under the auspices of Poland's Ministry of Re-



gional Development, and received an award from the Ministry of Science and Higher Education.

The system makes it possible to simulate emissions and the concentrations of hazardous substances in specific areas by creating a "virtual" measuring station. Data on air quality is especially important for urban and recreational areas as well as those with heavy traffic. Such "virtual" stations can be used to assess air quality in areas far from real monitoring stations. The system was launched in 2006 and has been regularly updated since then.

Do you have more innovative systems like this?

Generally, the institute's research is not concerned with developing "hard technology." We mainly deal with evaluating the environmental aspects of such technology. First and foremost,

we do our best to facilitate and promote innovative projects. Since 2004, we have been involved in implementing the EU's Environmental Technologies Action Plan in Poland. The importance of innovation in environmental protection in Poland has grown recently. We take part in EU projects aimed at promoting "eco-innovations," especially by supporting their use in business practice. We are working closely with the Ministry of the Environment to de-

velop guidelines for the National Environmental Technologies Action Plan and to develop a system for monitoring environmental technology in Poland. Recently, we have become involved in efforts to develop an "Environmental Technologies Verification Scheme" for the EU and bring it in line with similar systems in the United States and Canada.

Every year, we partner with the International Poznań Fair to organize the Poleko International Environmental Protection Trade Fair. We help organize an exhibition of "eco-innovations" and environmental technology as well as debates on eco-innovations and their use in practice. We help promote these innovations on European markets.

The institute helped found and coordinates the work of the Polish Environmental Technology Platform. What are the aims of this organization?