



## COMPANY PROFILE

# Institut Scientifique de Service Public - ISSeP Scientific and Technical Support for Metrology and Risk Assessment in Wallonia

An interview with Mr Marcel LAMBERT,  
Director General of ISSeP

### What are the key figures and the areas of expertise of ISSeP in the Walloon institutional landscape?

The *Institut Scientifique de Service Public (ISSeP)* (in English, Scientific Institute for Public Services) started its activities in 1990, rising from the ashes of a former national research institute dedicated to extractive industries. It serves as an organization of public interest, under the authority of the Walloon Government.

ISSeP's missions have been recently totally reorganized and concentrate on two sectors:

- measurement and collection of environmental data (air quality, water quality, soil pollution, etc.);
- risk assessment for populations and ecosystems, and control of nuisances.

For both sectors, ISSeP can provide four types of mission and services:

- operation of environmental monitoring networks;
- metrology and development of state-of-the-art laboratory analytical methods;
- services and expertise;
- research.

To carry out these missions, along with other services on the account of third-parties, ISSeP relies on 300 employees, the majority being involved in scientific activities.

First, ISSeP's primary activity is the operation of monitoring and environmental characterization networks, as a support to the Walloon Administration to fulfill Walloon and European legal obligations on environmental protection and monitoring.

Then, to ensure a reliable development of measurement and laboratory methods, as well as the control of contingencies on the Walloon territory, the Government also entrusted ISSeP with the role of Walloon scientific reference and validation laboratory center. Its core mission is to improve Wallonia's metrological and expertise capacities, while relying on complementarity and reference third-party organizations skills. The key goal pursued here is the anticipation of risks related to emerging substances in the environment, by developing efficient sampling and measurement techniques.

Thirdly, alongside these public service tasks, ISSeP provides an array of services to the private sector, in line with its competences. ATEX certification of electrical equipment for explosive atmospheres, or identification of sources in fire accidents are among these services.



Finally, when I assumed the leadership of ISSeP in 2011, research activities had been progressively abandoned. In the Nineties, it used to account for about 50% of our turnover. Realizing that conducting up-to-date research in our field of competence was essential to safeguard and strengthen our expertise and our image of scientific reference, my priority has mainly been to redeploy research in support of Walloon policies. The challenge was significant. To my great satisfaction, the workforces were enthusiastic and fully engaged in the project. I thank them for

securing the future of their institute. The percent range of ISSeP's turnover dedicated to research activities reached 2% in 2012. It will increase to more than 15% in 2015. Although these figures remain relatively limited as compared to other institution or research centers, we are now on the rising limb of the curve and hope to continue developing our research expertise.

### Can you tell us something about your areas of research?

R&D activities integrate upstream research and target a better understanding of the mechanisms influencing environmental quality. We mainly develop tools for environmental monitoring and methods for the identification and mitigation of risks.

ISSeP's own capital currently funds a large part of these research projects, but our objective is to regain scientific recognition in order to reintegrate, as in the past, international research networks.



Measurement of greenhouse gases flux from agricultural crop (ICOS, Integrated Carbon Observation System)



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### Could you name some examples of ongoing research projects?

First, we have a series of projects dealing with the study of concentrations and distributions of pollutants (and other particles) in the air, particularly in urban environments. Project SPECIMEN (for Speciation, Elementary Carbon/Organic Carbon, Metal and Number size distribution) and project EXTRACAR (for Exposition, Trafic and Carbone noir) are self-funded projects. As an example, EXTRACAR focuses on the measurement of black carbon concentrations (combustion residues) in the urban environment, and provides a model-based assessment of its spatial-temporal distribution in light of the changes in environmental conditions. The distribution is then used to generate an estimation of human population exposure as a function of transportation scenarios.

Thanks to the experience and technical expertise gained through both of these projects, ISSeP also participated in two initiatives at the European level:

- APHEIS (Monitoring the effects of air pollution on health in Europe) focusing on the evaluation of the impact on human health induced by air pollution in Wallonia;
- ACCEPTED (Assessment of changing conditions, environmental policies, time activities, exposure and disease) carried out in the framework of a project call launched by the ERA-ENVHEATH network. It focuses on indoor exposition of populations to different pollutants and attempts to correlate this exposure to changes in the quality of environmental air.

Finally, the CARMAT project is an example of a project funded in the framework of the Walloon 2.green Marshall Plan. This project, coordinated by RECOVAL, includes several Walloon companies and research centers. It aims at improving recyclability of slag from steel mills using CO<sub>2</sub> captured from industrial gas emissions in building and public works materials. In this project, ISSeP's task is to evaluate the toxicological and environmental safety of the new products, as well as the environmental costs of the manufacturing processes.

### What kind of research partnerships did you develop with the other regional institutions in order to address the requirements of the Walloon Region?

ISSeP is involved in different types of partnerships, depending on the type of project and the partners. We started with occasional partnerships with the academic world, generally focused on specific research projects or doctoral theses. More recently, we initiated recurring partnerships with third-party laboratory or research companies in the framework of



Development of steel slag validation processes (CARMAT project)

Walloon (GISREAU) or French-Walloon (GIS 3SP) scientific interest groups. These two groups aim at developing synergies in the fields of characterization and monitoring of water quality, and of polluted sites and sediments, respectively.

ISSeP also contributes to other European networks, such as ENERO (European Network of Environmental Research Organizations), which promotes cooperation between EU-members in the field of research programs, knowledge transfer, and policy harmonization.

As a committed strategic and competent partner, in tune with current societal challenges and constraints, ISSeP constantly questions and challenges itself in order to evolve. We are working to improve international opening and recognition of Wallonia's full potential at the European scale.



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