

Providing access to environmental radioactivity measurements during crisis and in peacetime

Two tools developed by the french Institute for Radioprotection and Nuclear Safety

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Enhancing nuclear safety

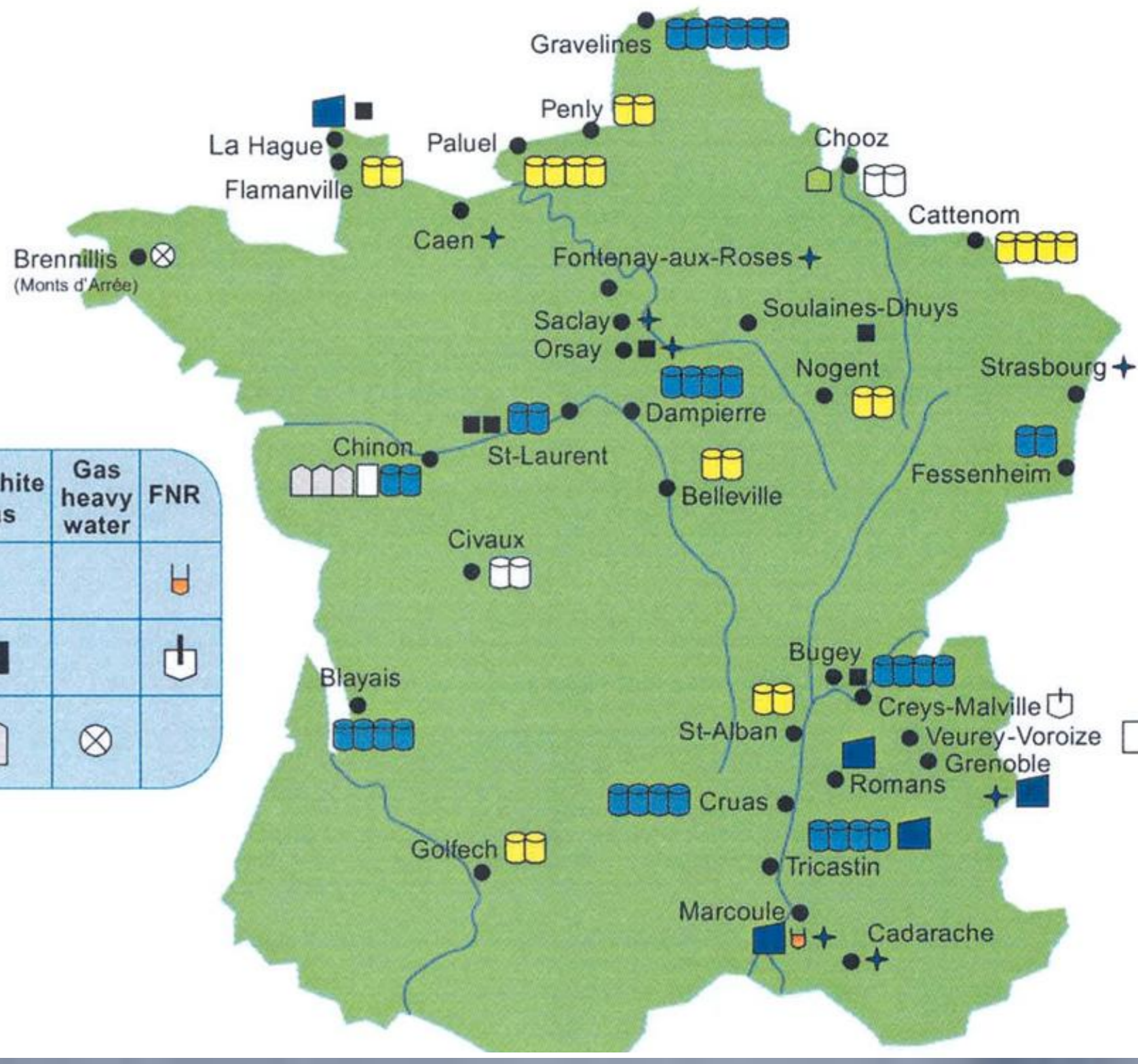
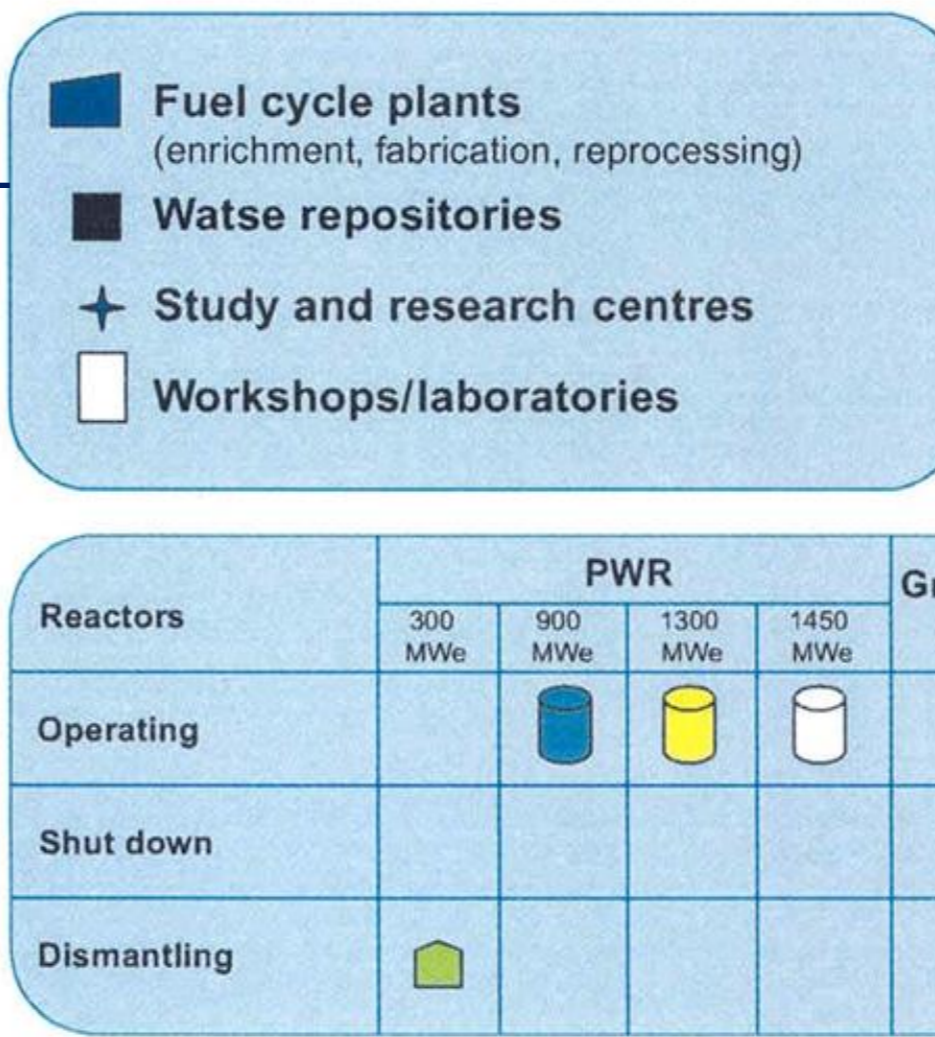
1 - THE FRENCH CONTEXT

All over the French territory, thousands of radiological environmental measurements are produced each month, whether from IRSN, operators of nuclear facilities or other public, private or non-governmental organizations. In the event of a radiological accident, many additional measurements would also be performed.

This multiplicity of actors makes data collection difficult and consequently a fluent access to this monitoring data to experts and policy makers, but also to the general public.

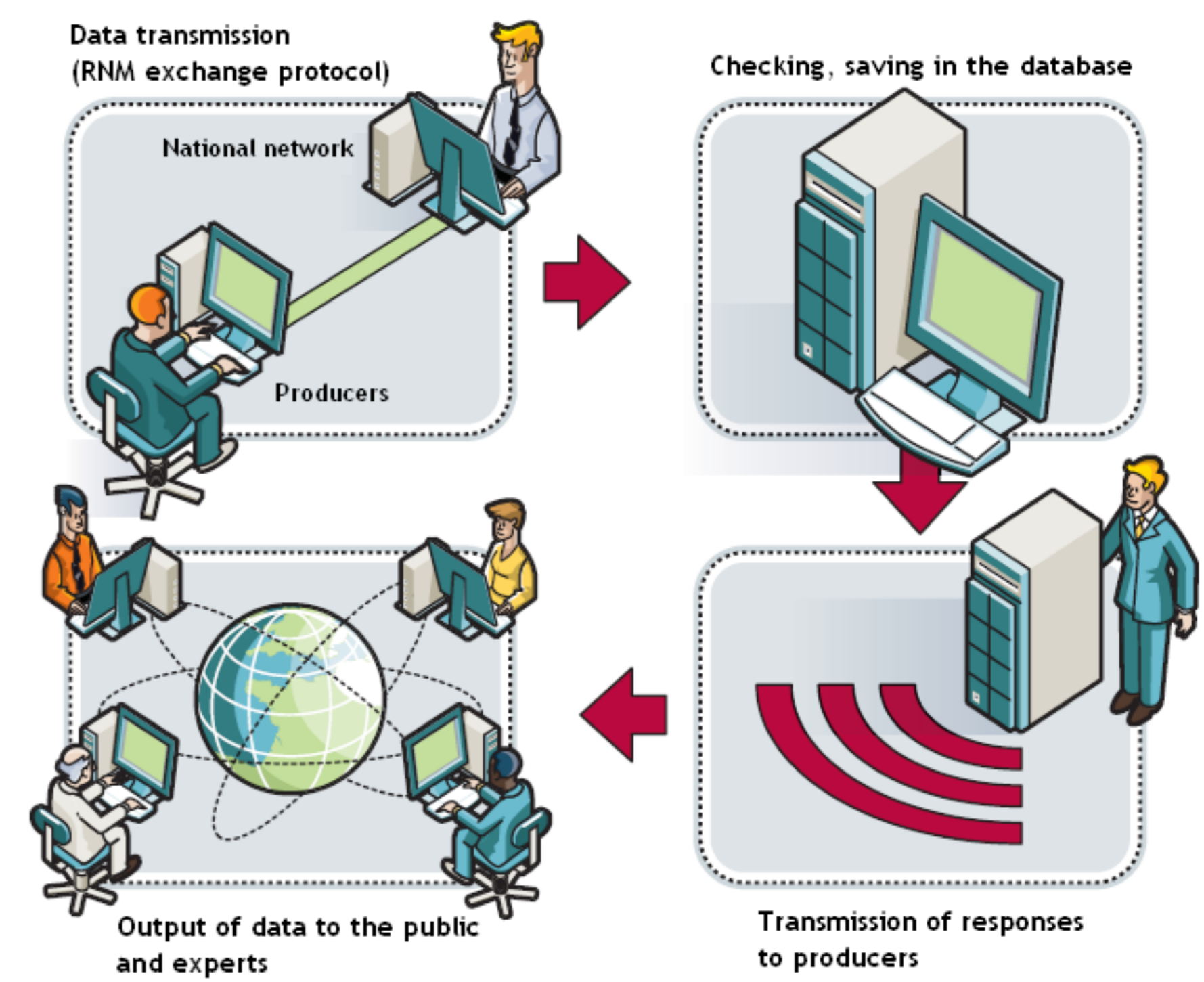
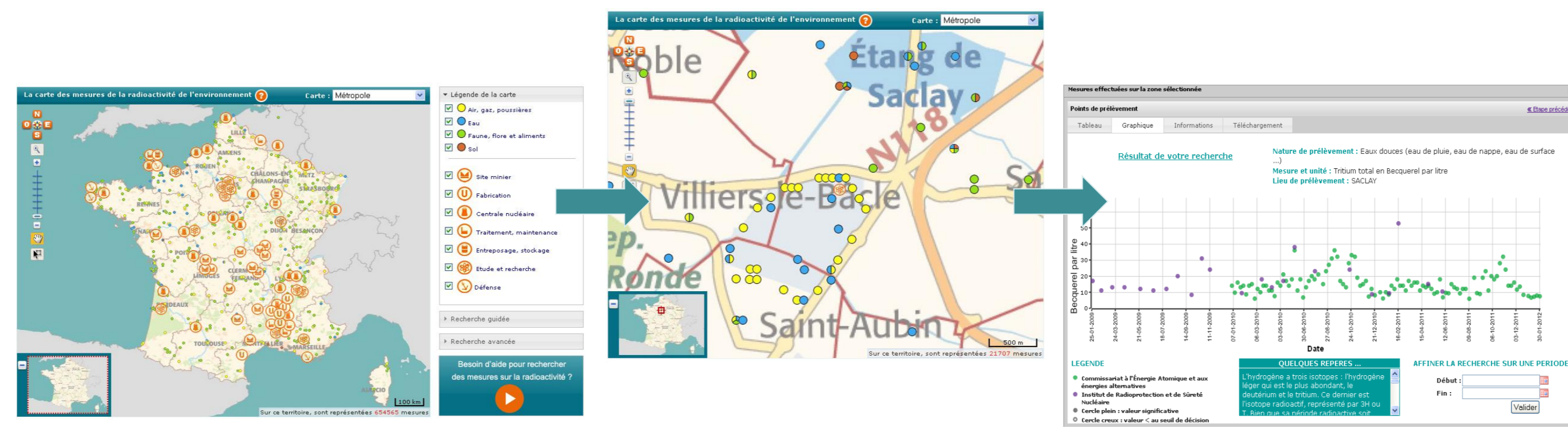
2 - PROJECT OBJECTIVES

To solve this problem, two projects were launched by IRSN with the aim of developing tools to centralize information on environmental radioactivity in normal situation (RNM project for "Réseau National de Mesures" - National network of radioactive measurements) and during radiological crisis (CRITER project for "CRIse et TERRain" - Crisis and field).



3 - RNM : Transparency in public information in normal situation

The RNM mission is to contribute to the estimation of doses from ionizing radiation and to inform the public. To achieve this goal, the network collects and gives access to the public through the Internet the results of environmental radioactivity measurements obtained in a normal situation by the French stakeholders.

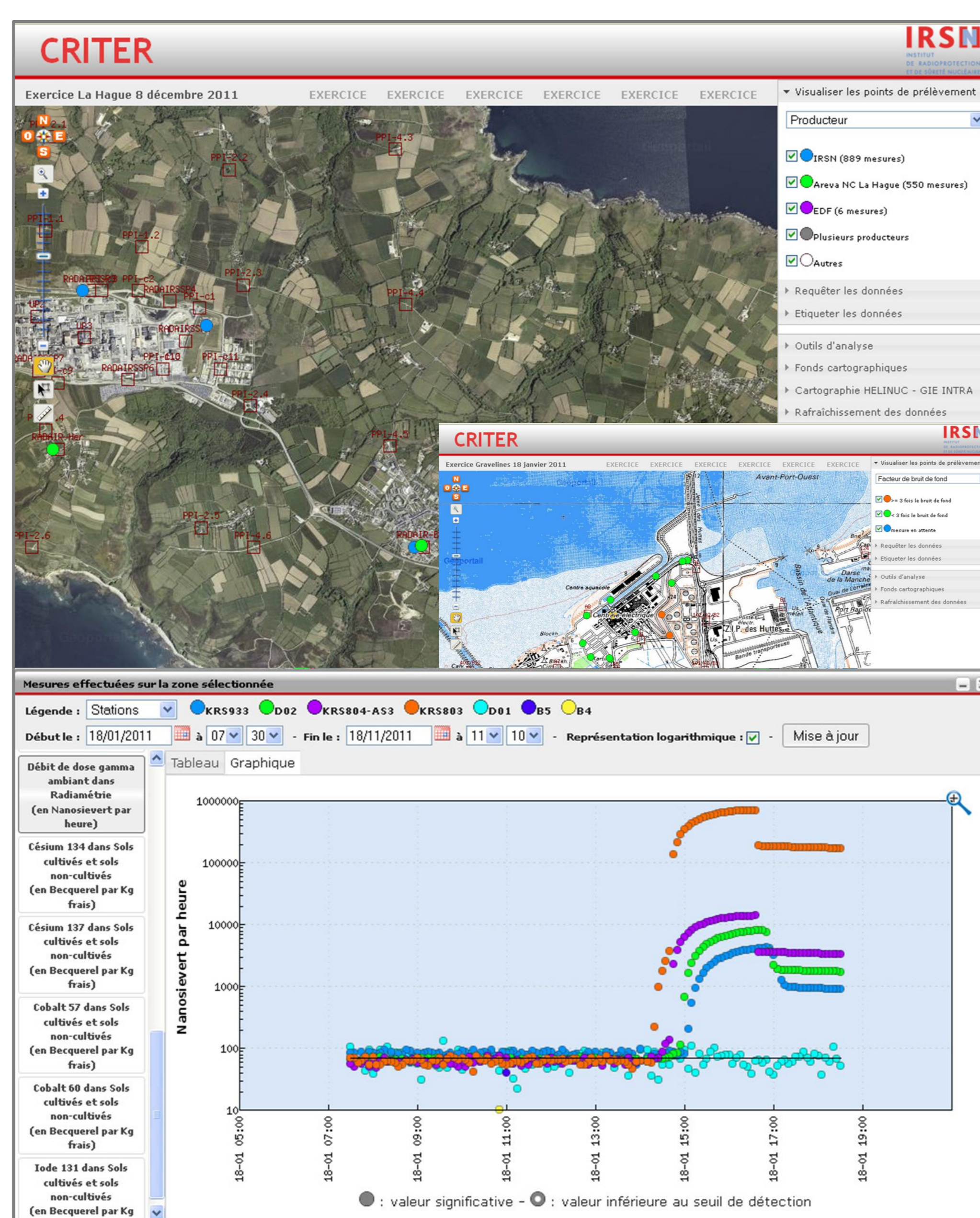


Therefore, the national network information system is an essential tool for the authorities, experts and the public.

More than 17,000 measurements are transmitted each month to the RNM. 3 years after its launch, the database contains nearly 700,000 results. In February 2010, the opening of the public website (www.mesure-radioactivite.fr) was a major step toward transparency and information.



4 - CRITER : An information system for the experts in crisis or post-accident situation



In case of radiological emergency, IRSN's mission is to centralize and manage - at the national level - all the results of measurements or analysis performed by all the stakeholders, in order to precisely and permanently determine the radiological state of the environment, before, during and after the accident.

The CRITER project involves data collection from all potential sources, their transmission, their organization, and the publication of the measurements during the crisis or post-accident situation. For each event in which any radiological health and environmental consequences requires the establishment of a crisis organization, a specific CRITER database is created.

For example, a CRITER IT system was implemented after the Fukushima accident in March 2011. The aim of the CRITER project was from the beginning to be an information system for the actors of the crisis (experts and decision-making bodies). However, because of the intense media pressure with the arrival on the French territory of contaminated air masses from Japan, IRSN quickly launched a CRITER public website to give access to radioactive measurements on the entire territory in near real time.

5 - CONCLUSIONS AND OUTLOOK

Both projects have developed complementary tools with compatible data repositories, allowing on one hand to form a national reference database with measurements taken in normal situation from all environmental compartments and around each nuclear facility, but also a crisis database able to quickly centralize the new measurements available from all those on the affected area and give access to these data for all decision-making bodies.

These information systems will continue to evolve taking into account not only technical improvements needed for their operation, but also the expectations and suggestions expressed by experts, policymakers and the public.

