

The Carnot Water & Environment gathers 11 research units (CNRS, INRAE, IRD, INSA, Aix-Marseille University, University of Montpellier, Savoie Mont-Blanc University), and the Institute of Filtration and Separation Techniques. It implements a strong expertise in earth and environmental sciences, in human and social science, and technologies, for the water and aquatic ecosystems management, required to support the socio-economic partners in their innovation and research needs.

www.carnot-eau-environnement.fr

INNOVATING WITH COMPANIES THROUGH AN OVERALL APPROACH EMBRACING LARGE AND SMALL WATER CYCLES

3 issues:

- **Preserve water and aquatic media quality**
- **Sive an access to water consistent with uses**
- Protect the population

4 strategic research areas:

Water quality monitoring strategies and methods including innovative sensors and biosensors to characterize, identify, and monitor the pollution sources

Water work and networks, hydraulic infrastructures: Sizing, reliability, sustainability and optimization of the performance of waste water treatment plants, sanitation networks, drinking water, rainwater treatment plants, «green» infrastructures

Natural hazards management: forecast, zoning, alert, impacts, applied to floods, drought, avalanches

New water resources: techniques, safety, impacts, reuse of wastewater and rainwater, groundwater recharge, storage and optimization of consumption

Developing innovative water and aquatic environments management solutions within territories:

- Decision-making tools
- Numerical models and tools
- Nature based solutions
- Metrological devices, bio indication

The Carnot provides skills and resources to ensure research continuity from TRL 1 to 6 and to support the companies in the operational implementation phases of the developed solutions.

Target markets

- Hydraulic infrastructures
- Water and Environment
 engineering
- Equipment suppliers
- Industrial water users
- Agriculture





Skills applied to continental, groundwater, coastal waters:

- Hydrobiology, hydrology, hydro ecology, ecotoxicology
- Hydraulics, fluid mechanics, geo mechanics
- Soil sciences, agronomy, agro ecology
- Process Engineering
- Information and communication technology, mathematics, geomatics
- Sociology, geography, Economy
- Metrology, LCA

Platforms and observatories:

- La Feyssine, Centre d'experimentation Roger Ben Aïm: wastewater and drinking water treatment
- Geomechanics: soils, dikes, dams
- Chemical analysis, microbiological, ecotoxicology platforms
- Instrumented observatories: in urban, rural, agricultural, mountain areas, on rivers

Key figures

Permanent staff (full-time equivalent): 470 PhD Students: 140

Partnership incomes with industry: €6,7M Global budget: €47,5M

Contacts

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