

Irstea - National Research Institute of Science and technology for Environment and Agriculture

Irstea's multidisciplinary expertise enables Irstea to bring solutions to technological, industrial and social challenges in the agricultural and environmental fields. Recognized by its public and private partners, for its track record for innovation, Irstea has been awarded the Carnot Institute label (all units included) since 2006.



Partner of business in ecotechnologies and sustainable services

Target markets

- Water management and treatment
- Treatment and valorization of organic waste
- Agricultural equipment
- Ecotechnologies
- Agro -industrial and refrigeration technology
- Environmental engineering and restoration
- Natural and environmental risk prevention and management
- Management of natural resources - water, forests, biodiversity
- Environmental management (biodiversity, ecosystemic services)
- Planning and sustainable development of territories

An institute addressing economic and societal demands

Irstea provides in-depth expertise of current trends (technologies, regulations, market trends) and disruptive innovation to a variety of partners and stakeholders:

- ➔ Public authorities (Ministries, ONEMA, water agencies, local authorities, technical institutes)
- ➔ Corporations (EDF, Veolia , Suez ...)
- ➔ Consultants and engineering companies (Asconit Consultants, Artelia ...)
- ➔ Technology providers (Sulky-Burel, Pellenc, AGCO, John Deere ...)
- ➔ Start-ups, spin-offs, NGOs

In 2013, Irstea co-lead 13 theses with companies. Its incubator in Montpellier provided scientific and logistic support to several start-ups.

Irstea actively develops and protects patents, software, databases, and vegetal varieties, marketed by its active and professional licensing department (dvti@irstea.fr).

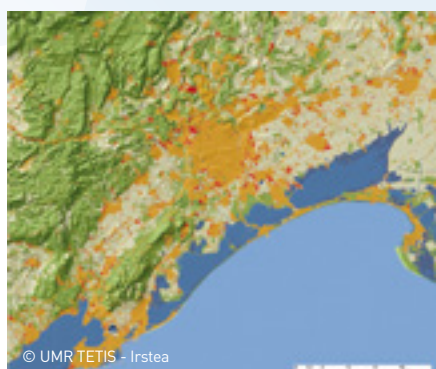
Skills

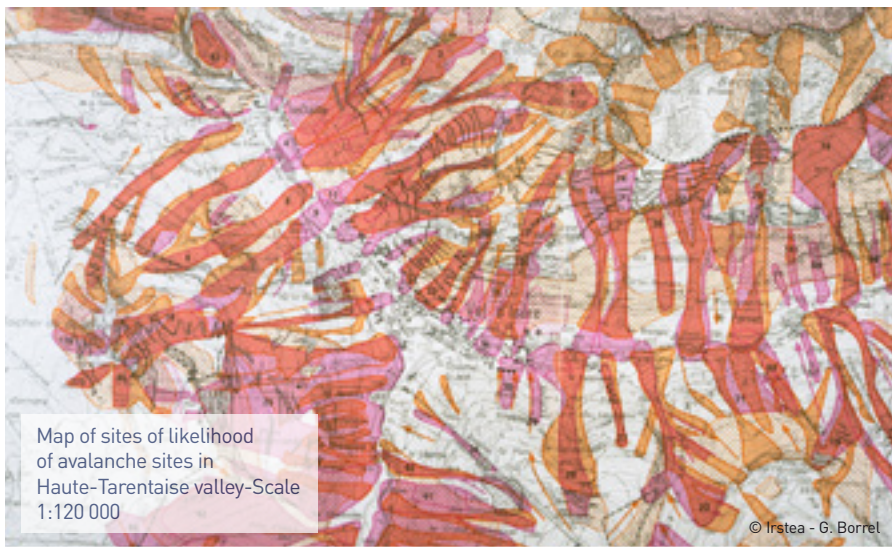
Irstea's multidisciplinary expertise ranges from engineering to social sciences, and provides systemic and sustainable solutions to complex problems

- ➔ Thermal, energy , fluid mechanics
- ➔ Hydrology and Hydrobiology



- ➔ Chemistry and Ecotoxicology
- ➔ Process Engineering
- ➔ Mechatronics, robotics , embedded systems
- ➔ Environmental Engineering,
- ➔ Environmental Observation and Remote Sensing
- ➔ Usability, design methods, health and safety of operators
- ➔ Environmental Analysis, Life Cycle
- ➔ Geomechanics, geomaterials, geosynthetics
- ➔ Safety of hydraulic structures and protection, risk sciences
- ➔ Scientific computing and Multi-scale modeling
- ➔ Resource Management and Territorial Development
- ➔ Systems of geographic and territorial information
- ➔ Analysis and evaluation of public policies





Map of sites of likelihood of avalanche sites in Haute-Tarentaise valley-Scale 1:120 000

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Facilities and assets

- Irstea has a dozen technological platforms (agricultural equipment, geomaterials, water treatment) and natural experimental sites (natural hazards, hydrology, ecotoxicology...), open to companies for joint research projects:
 - Experimentation in the laboratory or in the field,
 - Development, validation or qualification of technologies, methods, models, databases and computer codes.

A specific approach to SMEs: Captiven

Irstea offers specific support (seed funding, dedicated staff) to SMEs in the field of environmental metrology (measurement in natural environments, processes and environmental technologies). This project, funded until 2016 by the French "Programme d'Investissements d'Avenir", is awarded to three Carnot institutes: BRGM, IFREMER, and Irstea (project leader).
captiven@irstea.fr - www.captiven.fr

Research personnel (full-time equivalent): **1 200**
 including PhD students: **250**

Partnership research incomes: **15 870 k€**
 Research budget: **67 555 k€**

Quality and Standards

Irstea is engaged in a comprehensive quality policy. Several laboratories are already ISO9001, ISO 17025, or have other qualifications and accreditations. Irstea is also a leading player of French and European normative approach (e.g. DCE, agricultural equipment operator safety), and contributes to the definition of labels and industry standards.

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Irstea is an active member of a dozen regional industry clusters "pôles de compétitivité", including the international clusters Axelera and Water.

Cemagref has become Irstea in 2012.



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