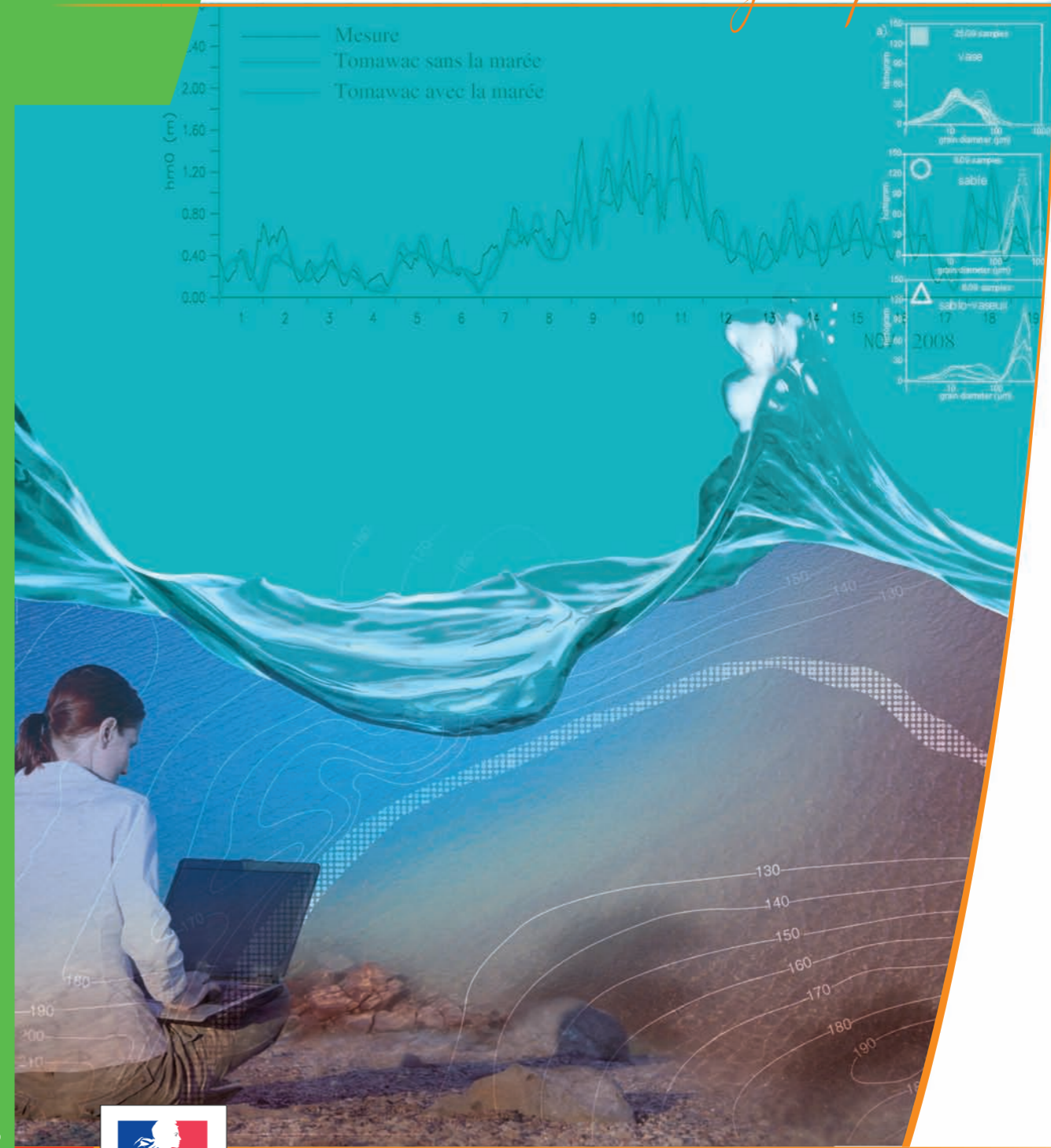


# CETMEF

Institute for inland and maritime waterways

*Sharing expertise*



Ressources, territoires, habitats et logement  
Énergie et climat  
Prévention des risques  
Développement durable  
Infrastructures, transports et mer

**Présent pour l'avenir**

## CETMEF

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L'Agence IITP - 8351 Compiègne B 031 944 512 - tel : 03 44 92 21 00 - Octobre 2010 - © : MEEDDM, DREAL Pays de Loire, Fotolia®, Shutterstock®, Corbis®.



Ministry of Ecology, Sustainable Development, Transport and Housing

# The CETMEF

## A maritime and river reference centre in Europe.

The CETMEF is a central technical department which comes under the Minister for Sustainable Development. It forms a crossroads for research, engineering and technical solutions. As a player in sustainable development and risk prevention, it provides services of general interest for the national community (State, public entities, local authorities, etc.).

Its international sphere of influence is reflected by active involvement in several European research programmes and international exchange networks: knowledge sharing platforms, learned societies, professional associations and international conferences.



> The CETMEF participates in the definition of technical and operational tests for the SINAPE project, the objective of which is to develop innovative information services for waterway transport.



> Steered by the CETMEF, the Waterborne France group is working on the emergence of the ships and ports of the future.



> As a reference State Department in the field of marine submergence and coastal structures, the CETMEF functions as a support facility for Préfectures (chief county administration offices).



> The CETMEF steers the execution of geographic information systems containing data on the potential for marine energy, available by zone.

## The CETMEF: unique know-how and unique expertise

The CETMEF promotes innovation, satisfying the needs of its principals with strong involvement in major emerging issues: intelligent waterways, ports and ships of the future, marine submergence, coast erosion, risk prevention, marine renewable energy, etc. It has recognised expertise and skills, thanks to the wide scope of its teams (researchers, experts, people from the field and theoreticians), close collaboration with the university and scientific world and a strong international bias.

> The CETMEF possesses a network of wave recorders to gather information on sea conditions. This data is transmitted to the Météo France weather centre and used for weather forecasting purposes.

## 4 slants to achieve a new vision of progress

### > Catalyze research and innovation in the maritime and river sector

Develop a veritable continuum of research, methodology, tools and applications to assist the maritime, coastal and river community.

### > Support sustainable transport, sustainable planning and preservation of the environment

Make a response to the ever-increasing issues of transport massification, sustainable planning, preservation of the environment and controlled management of resources.

### > Maintain control over hydraulic and industrial/port risks

Contribute to the safety chain - from hazards to crisis management, not forgetting assistance with forecasting, prevention and protection.

### > Innovate to further the security and safety of maritime, river and road transport

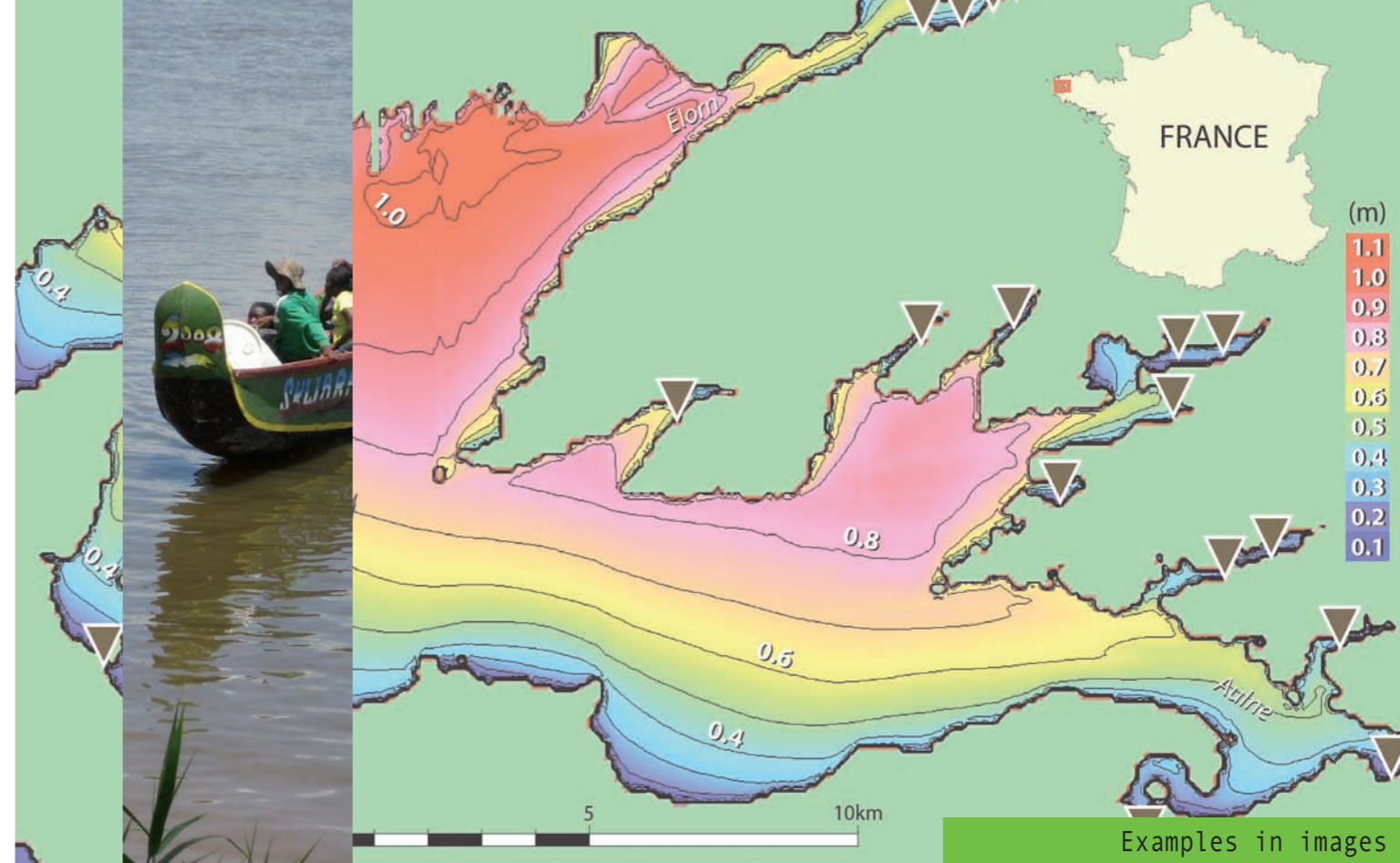
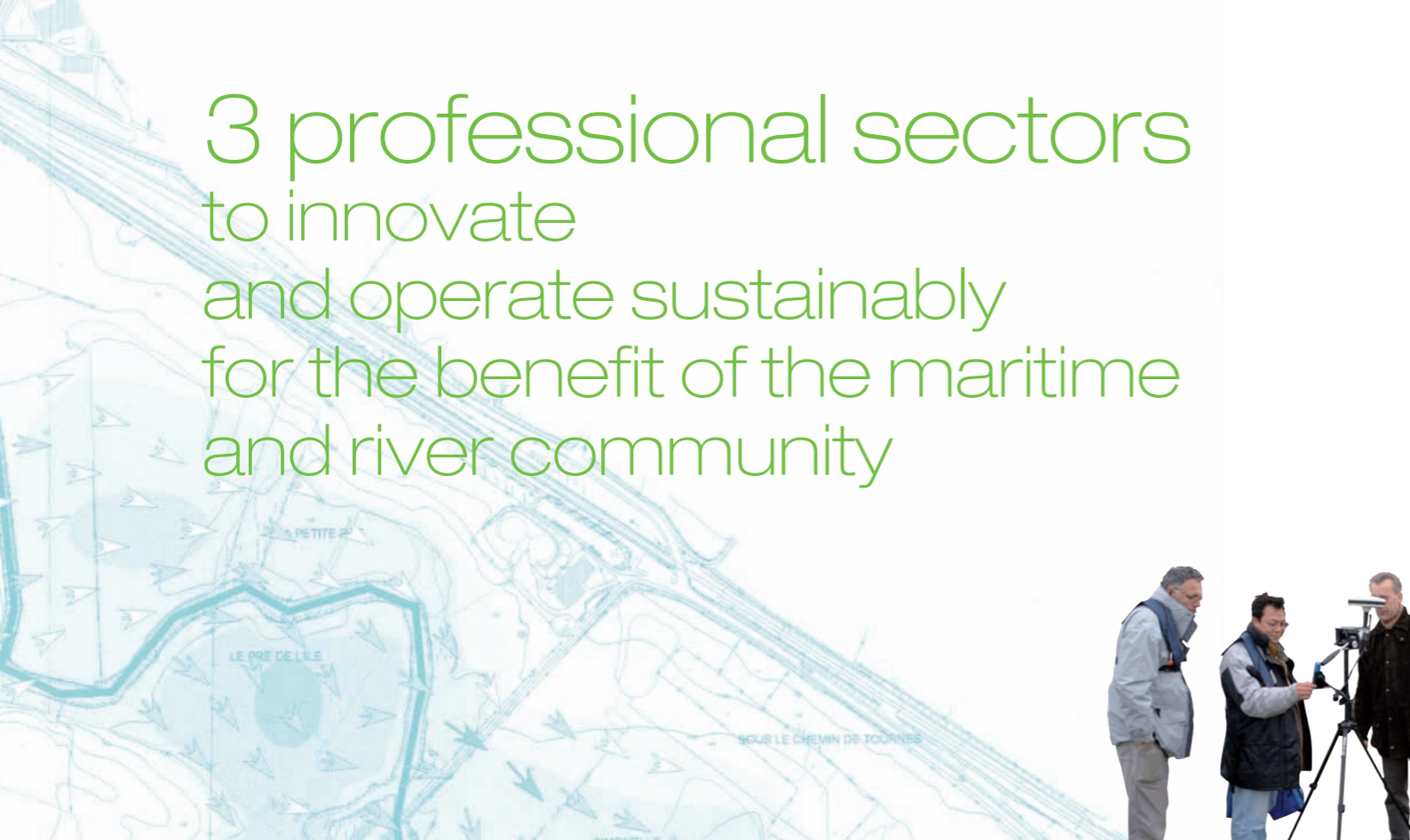
Share expertise, further links, exchanges and collaboration, take possession of regional R&D and step up international presence.

## 2 guiding principles

### > Develop partnerships, networks and synergy.

### > Move forward within a process of regular adaptation.

# 3 professional sectors to innovate and operate sustainably for the benefit of the maritime and river community



## • Research & Development

The CETMEF undertakes varied research and development activities. It sustains and coordinates a computing centre for the scientific and technical community. With various partners, it shares several research laboratories dedicated to hydraulic, digital hydraulic and coastal and environmental engineering science. Planning, flooding, simulation: the CETMEF develops and distributes software for local authorities and engineering offices.

## • Engineering and Methodology

State-of-the-art, technical opinions and expert assessment: the CETMEF assumes a veritable role as a catalyst and distributor of knowledge to infrastructure managers, transport operators and engineering offices. Multimodality, environment and planning and innovation in boat/shipbuilding play a major part in its *raison d'être*. Every year, with its European counterparts, the CETMEF publishes reference works, available on its Internet site.

## • Security and Intelligence

In the same way as the management of roads, maritime and river navigation requires permanent technical and technological innovation. The qualification of systems, specifications for equipment and optimisation of methods: the CETMEF helps to achieve constant improvement in maritime, river and road transport security and intelligence. An expert team, based on satellite applications and information technology, the CETMEF accompanies the departments in charge of security, maritime and river signalling services and road network operation.



## Complex computing

The CETMEF is equipped with a high-performance computing grid: 95 processors operate in parallel to rapidly solve complex hydraulic calculations. These relate to the swell in ports or flood forecasting. The advantage of this computing grid is that it is self-service. The grid and supported software can be accessed with a simple Web browser from anywhere in the world via a dedicated Internal portal.



## Assistance with major projects

Alongside the Voies Navigables de France (VNF) (French Waterways), the CETMEF provides the expertise required to manage waterway networks (e.g.: Seine North Europe). It steers the scientific and technical committee of the canal project, conducting various capacity studies by means of its FUDAA-SINAVI software. From preparation of the request for quotation to selection of the group of companies, the CETMEF is helping to carry out this major project.



## Reinforcing security and reducing risks

Automatic Identification System: the AIS is an automated information exchange system. It provides an accurate image of shipping movements for the entire coastline, extending from the coast for a distance of around 50 nautical miles. With the AIS, ships can be located in real time. The data collected, once processed and correlated with other sources of information, is also channelled into various projects covering geographical and time analysis of environmental situations. An expert team, the CETMEF refined the doctrine applied to this system and worked on extending it to take in ports and rivers.



1 goal:  
take up the challenges  
of the future by focussing  
on security and efficiency  
in maritime and river transport  
and protection  
of the environment

**The CETMEF comes fully within the scope of the summit and agreement on the environment and the sea.**

Marine renewable energy, river dykes, dykes to protect against marine submergence and responsible dredging are everyday subjects in which the CETMEF fully plays its role as engineering expert, environment management promoter and distributor of knowledge by means of a number of publications.



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