



Service Hydrographique et Océanographique de la Marine

French Navy METOC support requirements Aspects

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SHOM

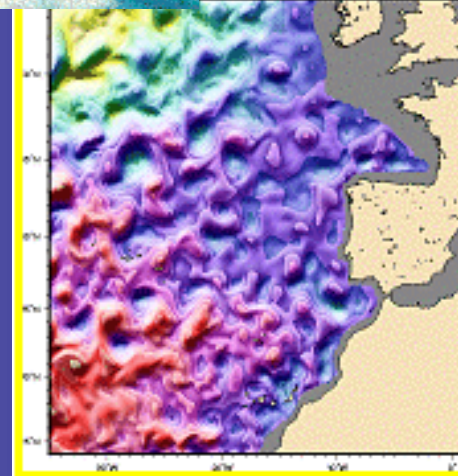
Centre Militaire d'Océanographie Toulouse

SOAP background

A 15 years sustained effort to build operational oceanography



RAN: pour le 8 Avril 1999



Altimetry and blue waters

1988 Athena sea trials

→ interest of altimetry for operational oceanography

New operational stakes

1993 SOAP 93

→ first ocean forecasting bulletin

Altimetry req.

1998 SOAP 1

→ first operational ocean forecasting system (support of FOST –SSBN)



2001...

→ FOST acknowledges the value of the system



Experience feed back

Altimetry
and blue
waters

New
operational
stakes

Altimetry
req.

- SOAP has become indispensable for Deterrence

1 A meso-scale compatible altimetry constellation is a first priority Defense need

- Objectives for future versions
 - Improve performance → better accuracy
 - multi-models approach including MERCATOR (very important Navy support)
 - Availability: ensure a sufficient number of satellites is "always" available

2 Spare satellite to ensure permanence of "meso-scale capacity" needed



New strategic environment

**Altimetry
and blue
waters**

**New
operational
stakes**

**Altimetry
req.**

From open sea (maritime lanes protection) to coastal waters

→ **Task force projection**

→ **Unit projection**



Photo © US Navy



New METOC needs

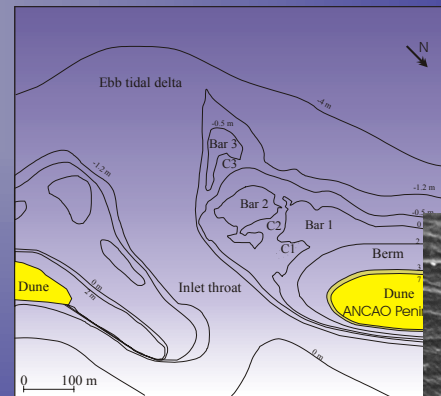
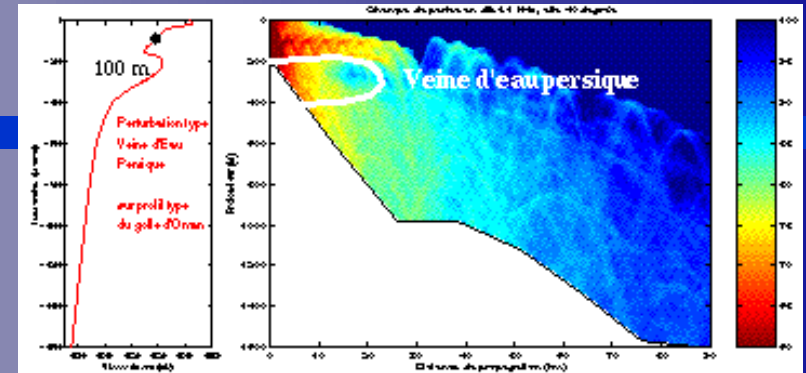
Altimetry
and blue
waters

New
operational
stakes

Altimetry
req.

- Bathymetry, Hydrology
 - Coastal ASW
 - Mine Hunting
- Currents
 - Mines drift
 - Amphibious operations
- Sediment dynamic
 - Mine burrial
 - Acoustic propagation
- Waves
 - Surf zone
- Optic
 - H & V visibility

■ ...

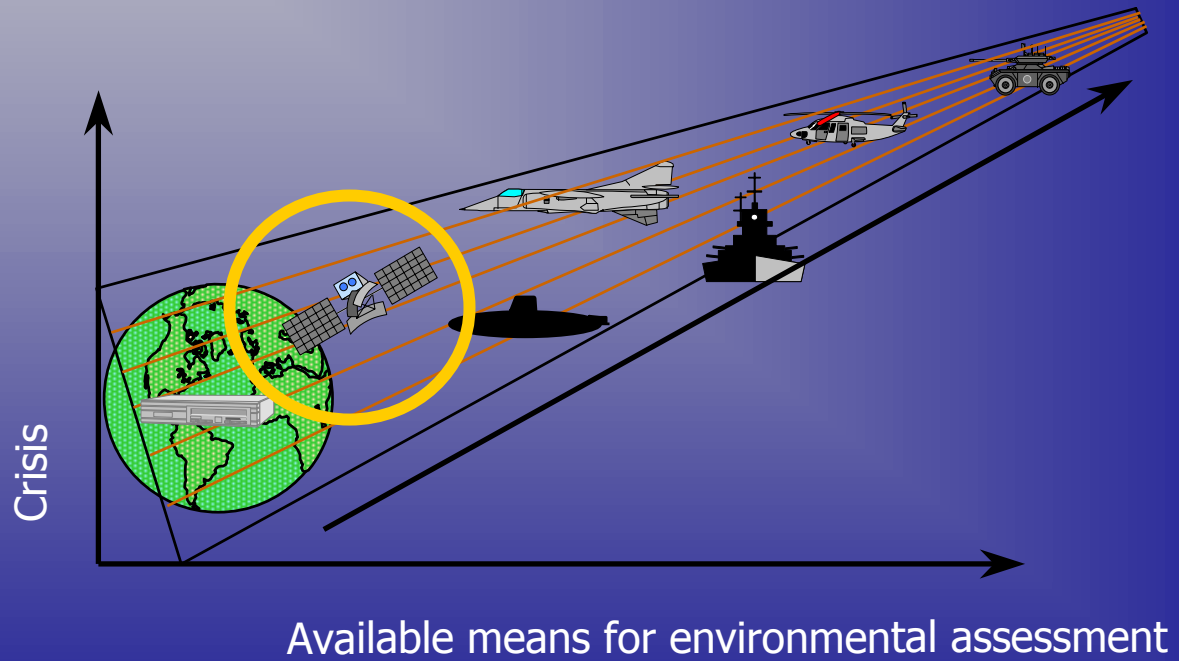


REA

Altimetry and blue waters

New operational stakes

Altimetry req.



Consequence

Altimetry
and blue
waters

New
operational
stakes

Altimetry
req.

3 Satellites remain essential for METOC environment assessment in operational new context

4 Efficiency of altimetry and alternative sources should be compared for cost effectiveness purpose (Altimetry vs SAR, Seacolor, SST...). Demonstration of altimetry for coastal operations still to be done?



Synthesis

Altimetry
and blue
waters

1 Meso-scale altimetry
constellation → 1st priority

2 Spare satellites for ops
availability

New
operational
stakes

3 Satellite essential
mean even in new ops
context

4 Altimetry input for
coastal predictions still
to be evaluated

Altimetry
req.

If AltiKa network is the solution for coastal as a side effect it would solve the redundancy pb for meso-scale
French Navy is keen to support ALTIKA (and does actually by participating feasibility phase)

