

France

i) The French Hydrographic Office (SHOM) has developed (2002) digital depth contour products. 16 sedimentological and bedform dynamic maps have been published since 1994. They result from acoustics and ground truthing, with a scale around 1/50 000 and they concern the coastal area. Digital products are now available and 5 new maps will be published in 2005.

ii) IFREMER, in association since 2001 with different partners (Universities, Marine stations) in the national project REBENT and the Interreg MESH project (since 2004) have developed different activities :

- A review based on existing datasets, with production of different digital products :
 - o Gridded bathymetry (1 low resolution grid covering most part of the Interreg NW area, 1 medium resolution grid restricted to the French territorial seas within this area)
 - o Digital maps for seabed type (coarse and medium scale) of Interreg NW area with an harmonised typology
 - o Holistic habitat maps : the main parts of the Channel and the Atlantic Coast are now covered by coarse and medium scale maps, at least off the 10 metre depth line. The classification used is local, the EUNIS correspondence is under studies but new categories are needed.
 - o Distribution maps of priority habitats have been produced for zostera beds and maerl beds around Brittany and partly around Normandy.
- Habitat mapping activities have been developed since 2003 mainly around Brittany in the tidal area and subtidal area up to 30 metres depth. The technologies used are Multibeam, sidescan sonar, AGDS, under water video, satellite imagery, airborne imagery, lidar and ground truthing. Four tidal and 4 subtidal sites are being studied, 7 lidar DTM, 3 digital sedimentological maps and 6 vegetation cover grids have been produced; detailed holistic habitat maps and biological data sets will be produced in 2005-2006.

iii) IFREMER is also developing predictive habitat modelling. In the MESH project, predictive modelling mainly concerns hard substratum (fucoid cover and kelp). In the Interreg CHARM project fish habitat maps have been produced for many species in the eastern Channel.

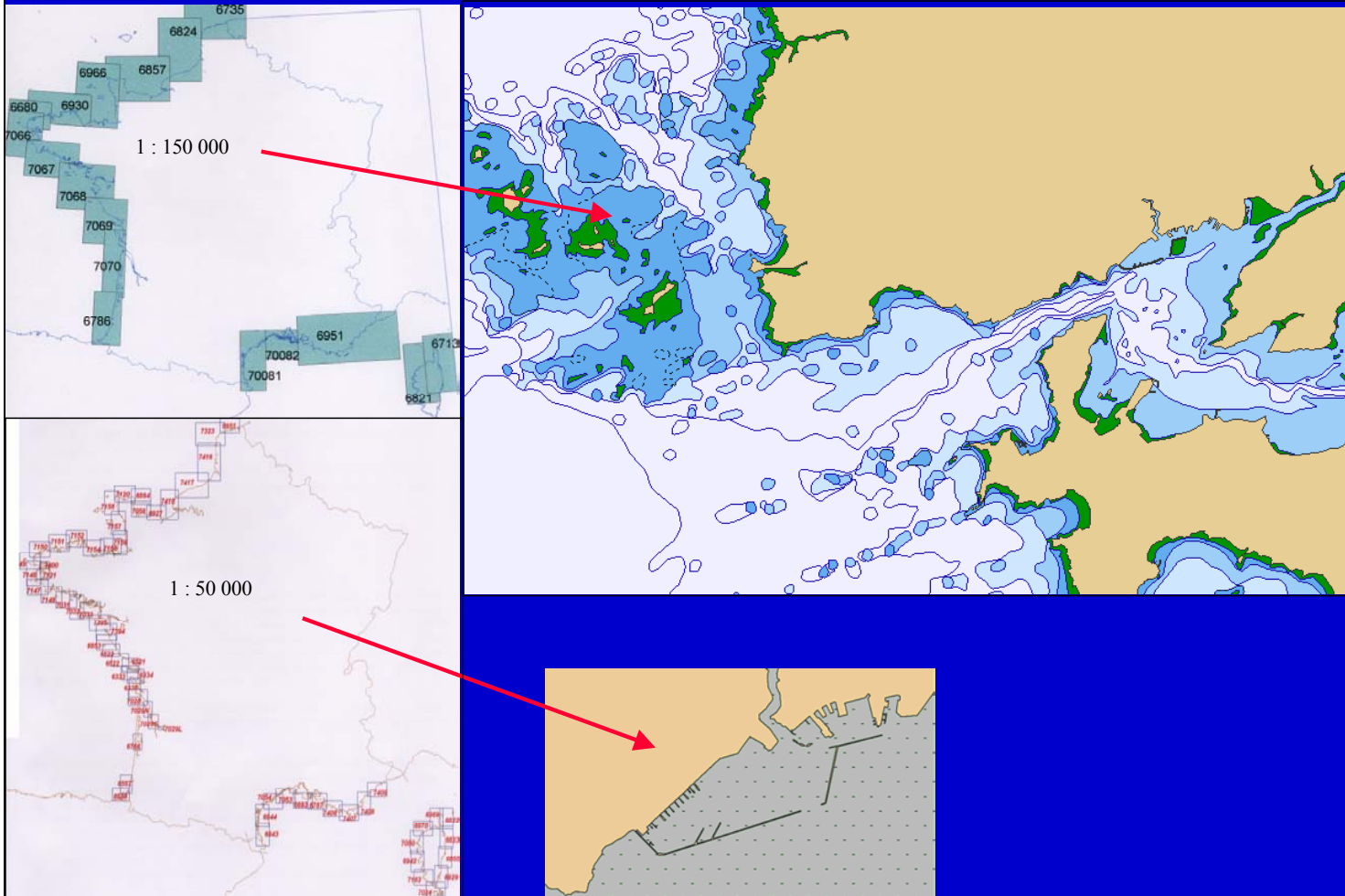
iv) Others habitat mapping activities have been conducted mainly around Brittany. They mainly concern Natura 2000 sites. Three digital holistic habitat maps have been produced under the direction of the Ministry of the Environment (MEDD/DIREN Bretagne).

v) A large national research program sampling program (PNEC) in Baie du Mont Saint-Michel. It implies universities and the National Museum (MNHN). These data will be used jointly with aerial photography and Lidar for habitat mapping.

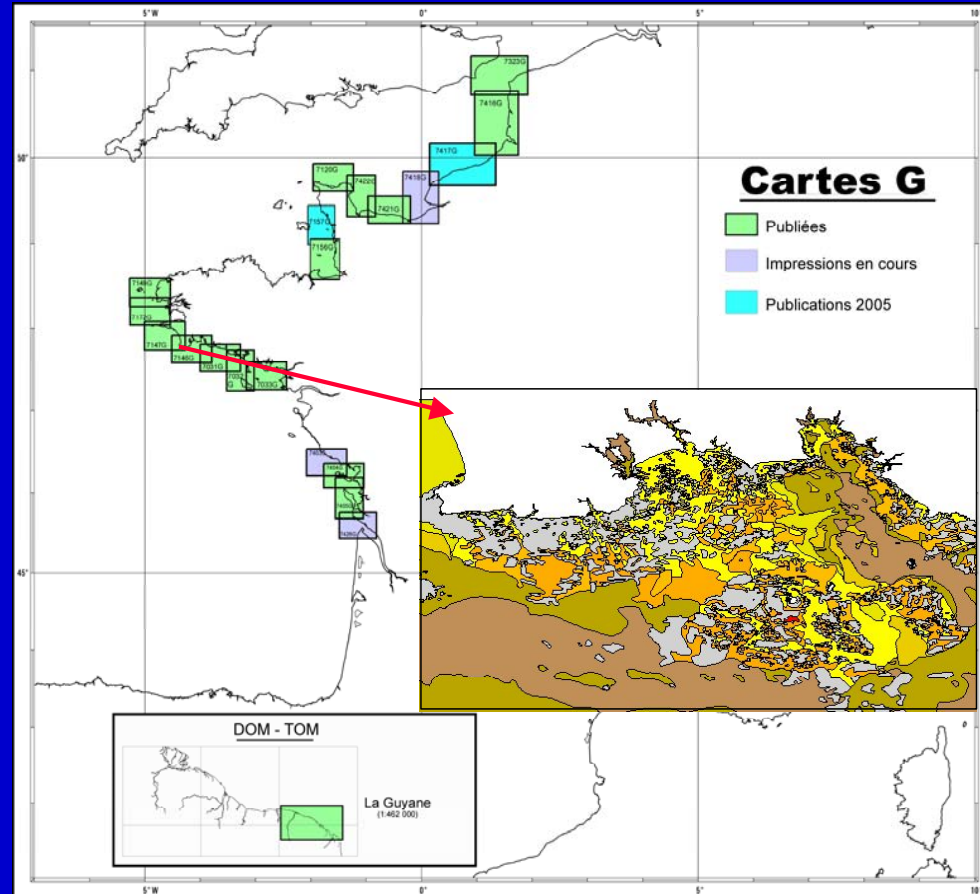
Organisation, name of contact person*	Geographical coverage (country, region)*	Project title	Date of work, expected year of reporting*	Techniques used (e.g. acoustics, ground-truthing)*	Datasets generated (e.g. bathymetry, physical habitat, biological, photographic)*	Brief description of work (including depth range)	Outputs: Reports, publications, maps, reference lists	Classification used; local (within project), national (state), EUNIS	Targeted end-users
France									
SHOM Jean Luc Deniel	France	TCIFMS	2002	Compilation of various sources for nautical charting	Coastline 1: 50 000 Coastline 1: 150 000 Depth contours 1: 150 000	Same coverage as nautical charts in French metropolitan area.	Digital product, formats : DXF, SHOMTC, S57 http://www.shom.fr/fr_page/fr_prod_num/prod_numerique_f.htm		
SHOM Thierry Garlan	France	"G Map" project	1991-2005	Sidescan, multibeam imagery, seismic, grab samples, old lead observations, cores	Sedimentologic and bedform dynamic mapping	Tidal area to 50 m	16 maps published (1994-2003), 5 to be published (2005), Digital product	Local	Fishermen
IFREMER (coord.) Brigitte Guillaumont, Jacques Populus and André Carpentier	France	REBENT, MESH and CHARM	2001-2005	Review based on existing datasets (mainly coarse resolution)	Bathymetry, Seabed type, Habitat, Landscape maps, Fish habitat maps	All depth ranges	Gridded bathymetry (2 scales), Digital maps for seabed type (1/500 000 and 1/50 000), Benthic habitat maps (5 holistic habitat maps and 2 priority habitats published ; 6 holistic habitat maps and 2 priority habitats to be published), Fish habitat maps, Reports http://www.ifremer.fr/rebent/ , http://www.searchmesh.net/ , http://charm.canterbury.ac.uk/	Seabed type : national harmonised typology, Benthic habitat maps : local (Eunis to be published)	Coastal managers, fishermen and and scientists
IFREMER (coord.) Brigitte Guillaumont, Jacques Populus	Coast of Brittany	REBENT and MESH	2003-2005	Multibeam, sidescan sonar, AGDS, under water video, satellite imagery, airborne imagery, lidar, ground truthing	High resolution : DTM, Digital seabed maps, Digital habitat maps, Vegetation cover grids, Reports	Tidal area to 30 m depth	7 tidal DTM, 3 Digital sedimentologic maps, 1 Habitat map, reports, 4 tidal sites and 4 subtidal sites under study (to be published 2005-2006)	Habitat maps : local, EUNIS under studies	Coastal managers and scientists
DIREN/MEDD	Brittany	Natura	2003-2005	Aerial photographs, ground truthing	Habitat maps on Natura 2000 sites	Tidal area and shallow bottom	3 Digital habitat maps	Natura 2000	Coastal managers

Habitat mapping
National Status Report
France, 2005

Coastline and depth contours : TCIFMS (SHOM)



Sedimentological maps : Map G project (SHOM)



Sedimentological maps : Map G project (SHOM)

N°	Titre de la carte	Auteurs	Echelle	Année de publication
6131G	Natures de fond des côtes de la Guyane française	Pujos M., Parra M	461 980	1998
7031G	Natures de fond de l'île de Penfret au plateau des Birvideaux – Abords de Lorient	Ehrhold A., Lejeune	50 000	1994
7032G	Natures de fond de l'île de Groix à Belle-île – Abords de Lorient	Dupont-Nivet G	50 000	1998
7033G	Natures de fond de Quiberon au Croisic	Enet S	50 000	1999
7120G	Natures de fond des abords de Cherbourg - Du Cap de la Hague à Pointe de Barfleur	Duval F	47 800	2003
7146G	Natures de fond de la Pointe de Penmarc'h à la Pointe de Trévignon	Le Faou Y., Pinot J	49 700	1996
7147G	Natures de fond de la Chaussée de Sein à la Pointe de Penmarc'h – Baie d'Audierne.	Gabelotaud I	50 000	1996
7149G	Natures de fond du Goulet de brest à Portsall, Ile d'Ouessant.	Armand J.C.	50 000	2003
7156G	Natures de fond de la Pointe du Grouin à la Pointe d'Agon – Baie du Mont-Saint-Michel et Iles Chausey	Ehrhold. A., Auffre	48 800	2003
7157G	De le Pointe d'Agon au Cap de Carteret - Passage de la Déroute	Martin E.	48 400	2005
7172G	Natures de fond de la Pointe de Saint-Mathieu à la Chaussée de Sein	Cordier C	49 300	2002
7323G	Natures de fond de Boulogne sur mer à Calais	Le Bot S. et Arma	75 000	2003
7403G	Natures de fond des Sables d'Olonne à l'île de Ré	Libaud J.B.	51 800	2005
7404G	Natures de fond de la Pointe du Grouin du Cou à la Pointe de Chassiron – Pertuis Breton et d'Antioche	Garnaud S	51 200	2001
7405G	Natures de fond de La Rochelle à la Pointe de la Coubre (Ile d'Oléron)	Weber N.	51 400	2003
7416G	Natures de fond des abords sud de Boulogne-sur-mer - Du Tréport à Boulogne-sur-mer	Bizien R	75 000	2000
7417G	Abords de Fécamp et de Dieppe- Du Cap d'Antifer à Dieppe.	Babut B.	75 900	2005
7418G	Natures de fond des abords du Havre et d'Antifer – Embouchure de la Seine de Ouistreham au Cap d'Antifer	Auffret JP, Laignel	60 000	1998
7421G	Natures de fond de la Pointe de la Percée à Ouistreham	Jardin G., Auffret J.	48 100	2003
7422G	Natures de fond de la Pointe de Barfleur à la Pointe de la Percée	Auffret J.P., Ehrho	48 000	2000
7426G	Natures de fond de l'embouchure de la Gironde - De la Pointe de la Coubre à la Pointe de la Négade	Mallet, C (Ed 1)	45 000	2005

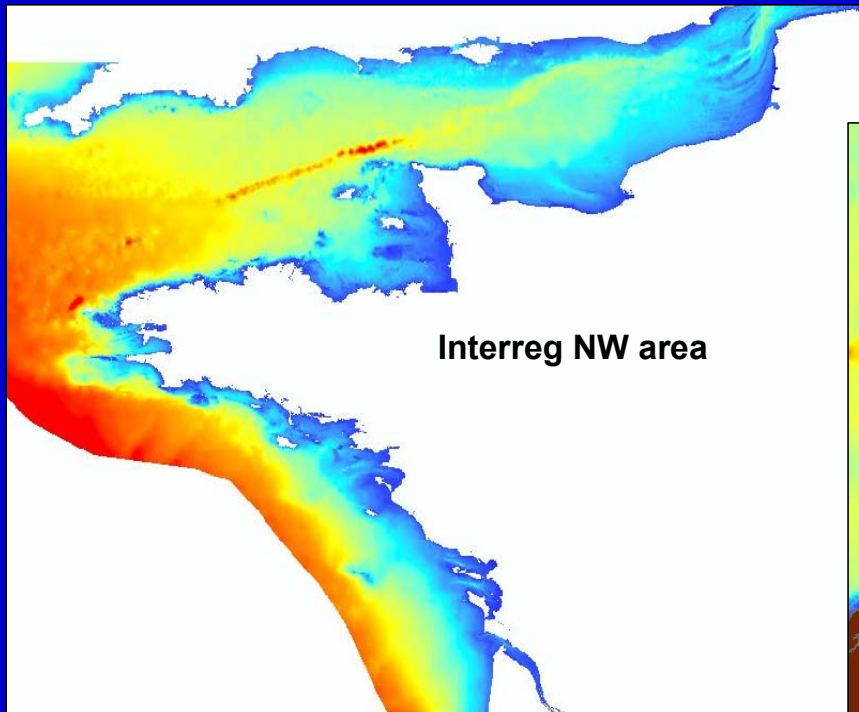
Cartes publiées

Cartes en cours
d'impression (février 2005)

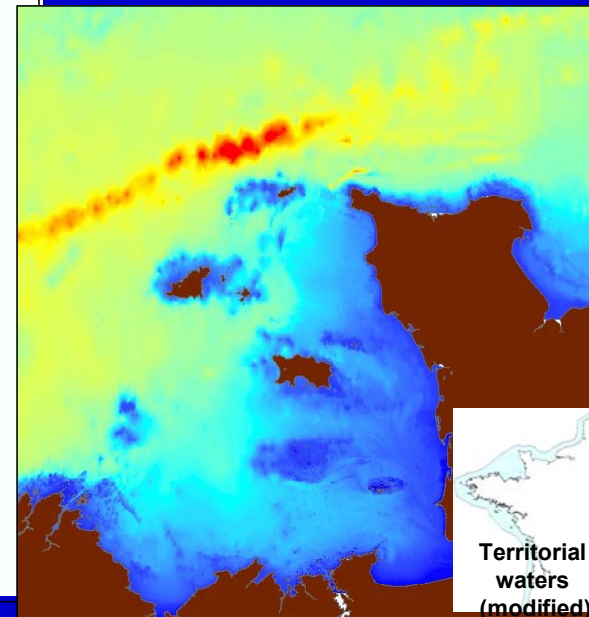
Cartes dont la
publication est prévue fin
2005

Bathymetry : MESH project (IFREMER)

Coarse resolution (1000 metres)
gridded bathymetry

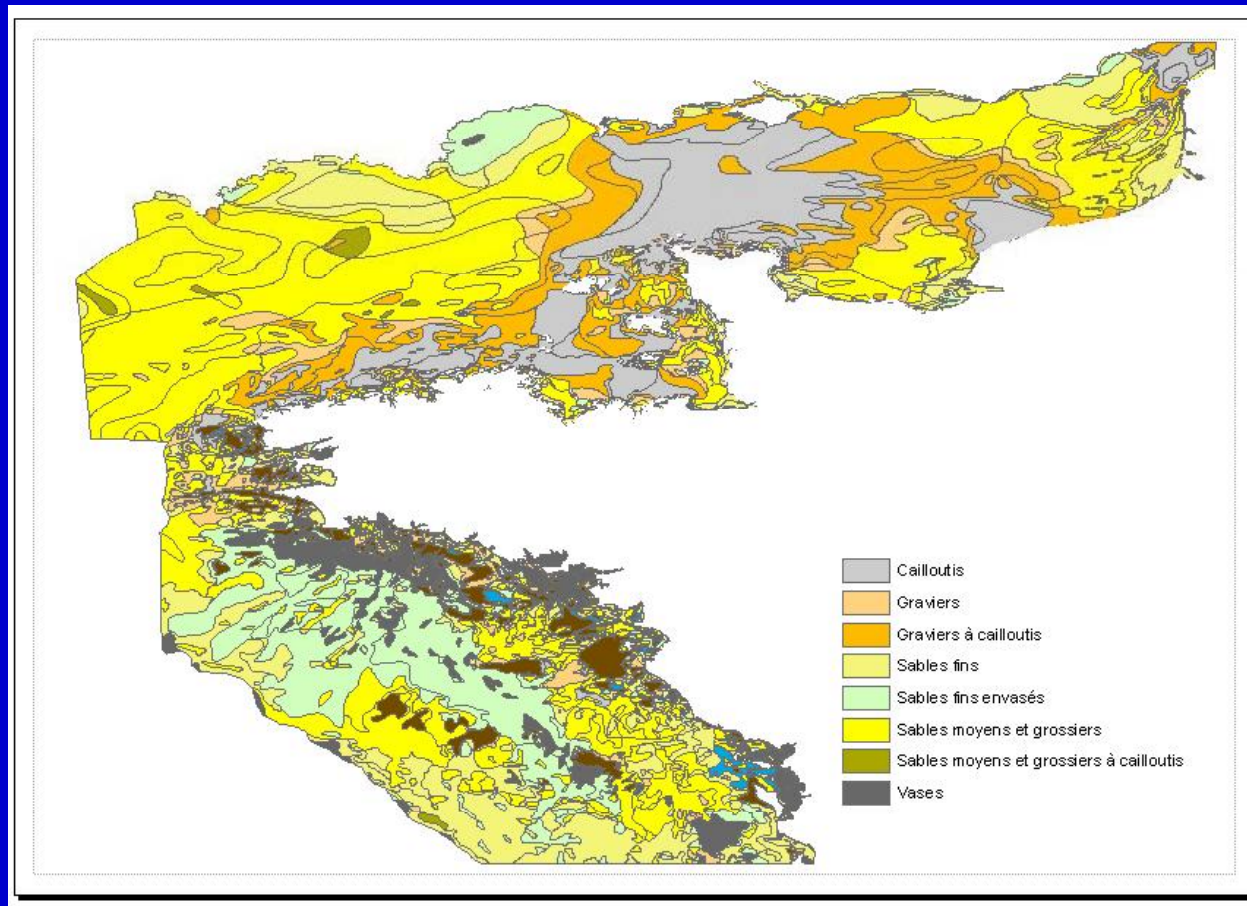


Medium resolution (200 metres)
gridded bathymetry



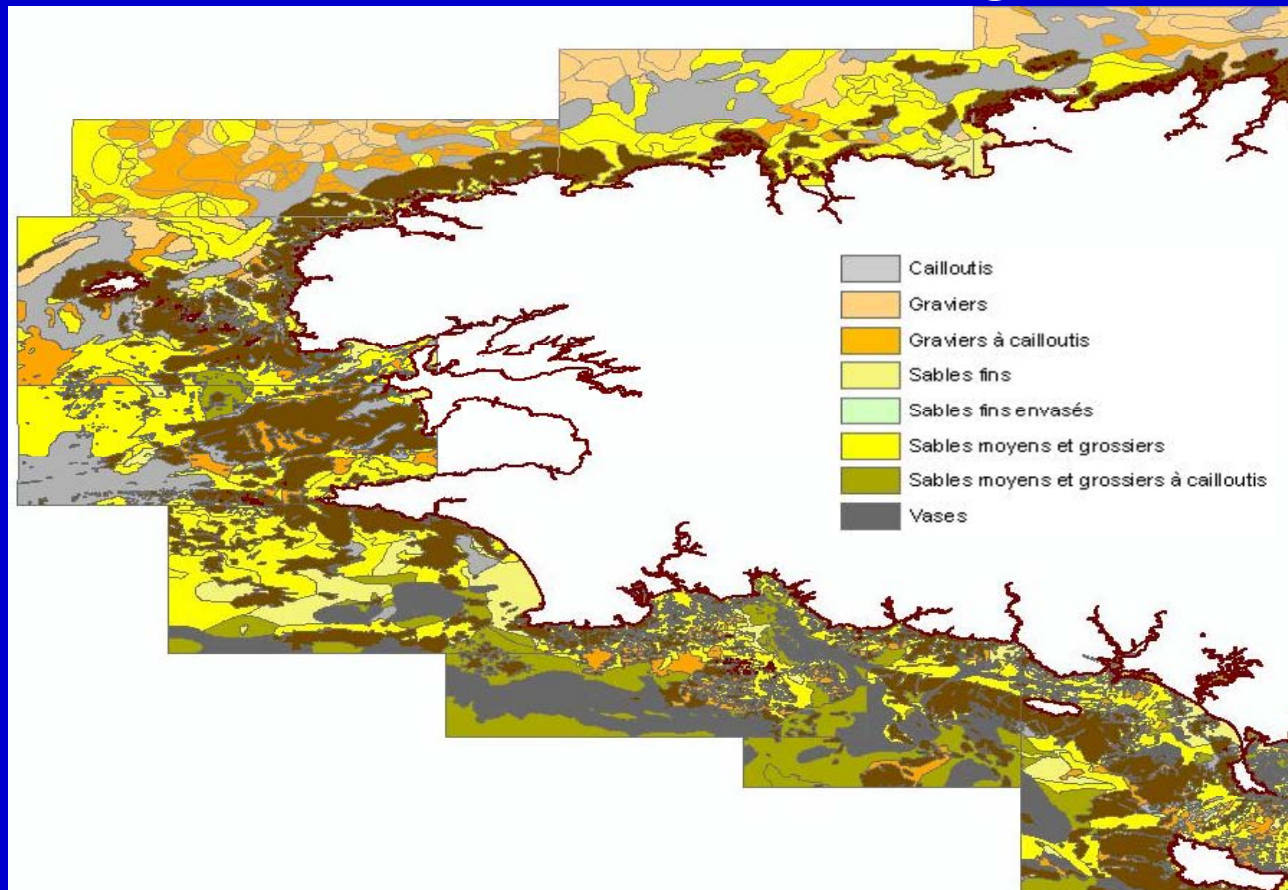
Seabed type : MESH Project (IFREMER)

Coarse scale : / 500 000 (review based on existing datasets)



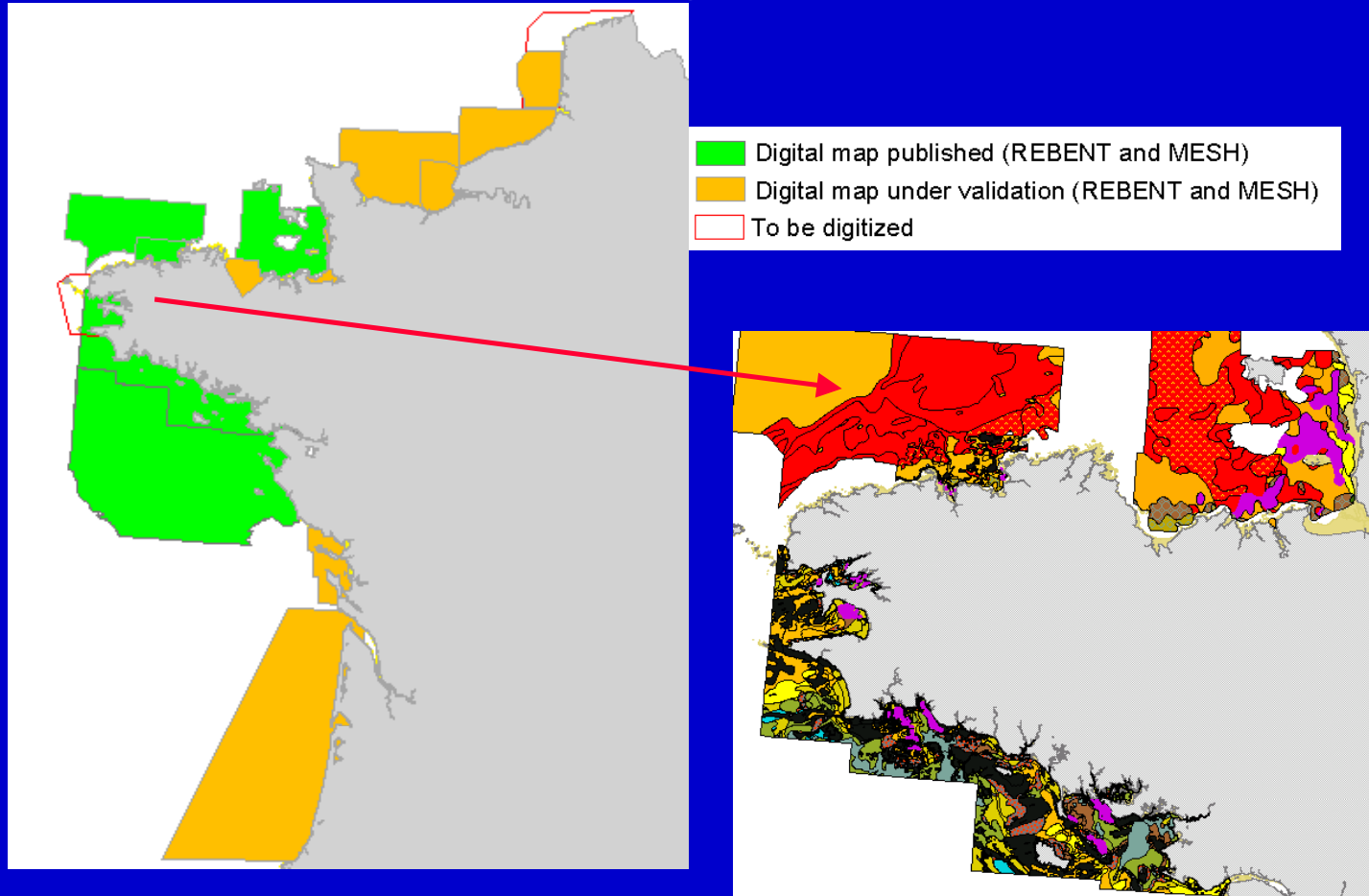
Seabed type : MESH Project (IFREMER)

Fine scale : 1 / 50 000 (review based on existing datasets)



Habitat maps : REBENT and MESH Projects (IFREMER)

Digital benthic habitat maps (existing datasets, coarse resolution)



High resolution habitat maps : Techniques used

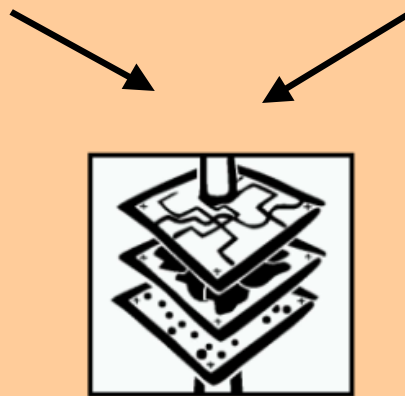
Tidal area :

Aiborne imagery, Satellite,
Lidar, ground truthing

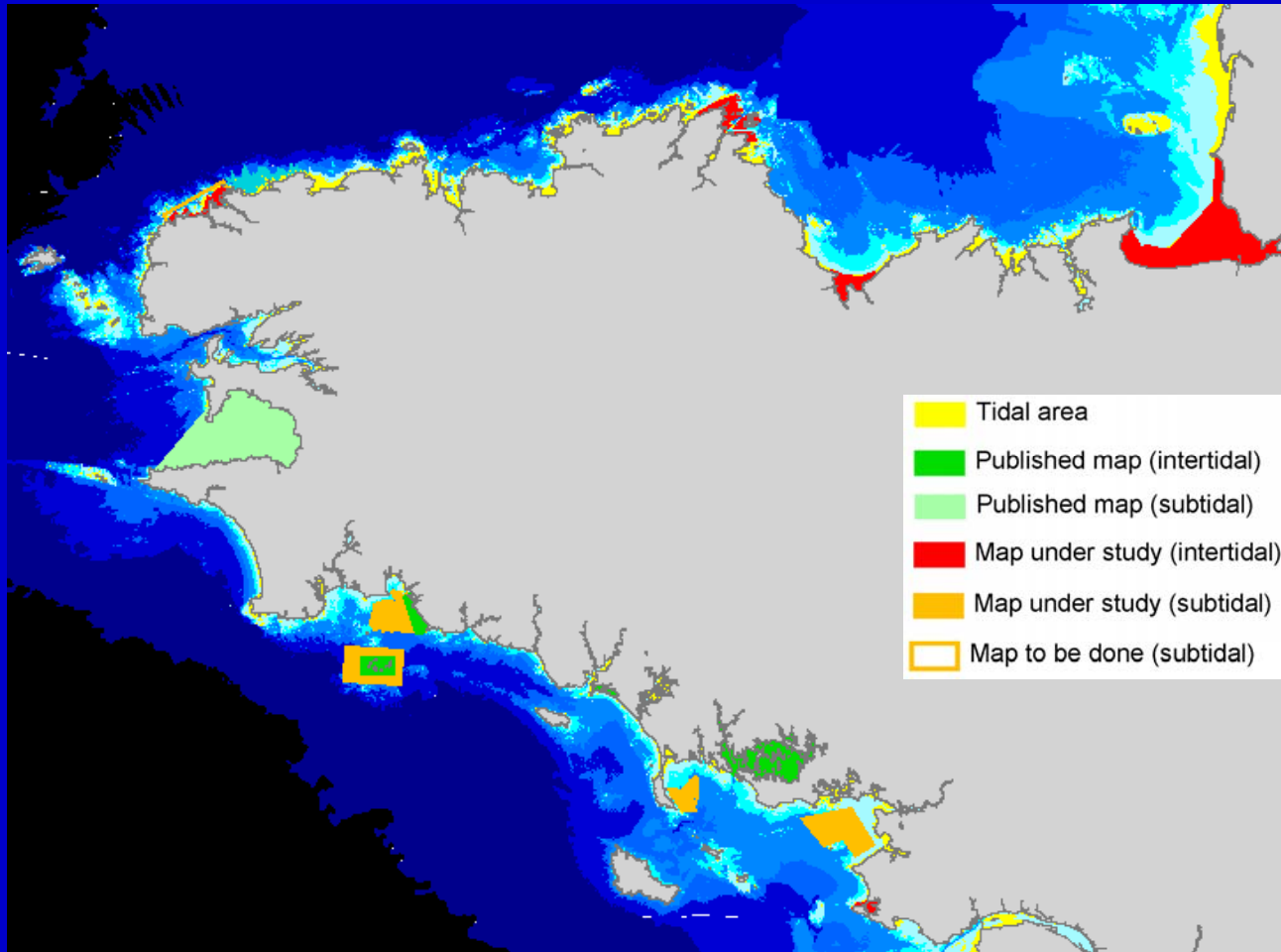


Subtidal area :

Multibeam, sidescan sonar, underwater
video, grabs, divers...



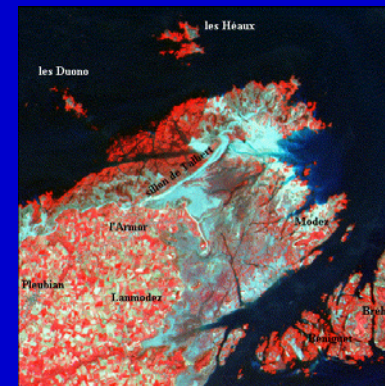
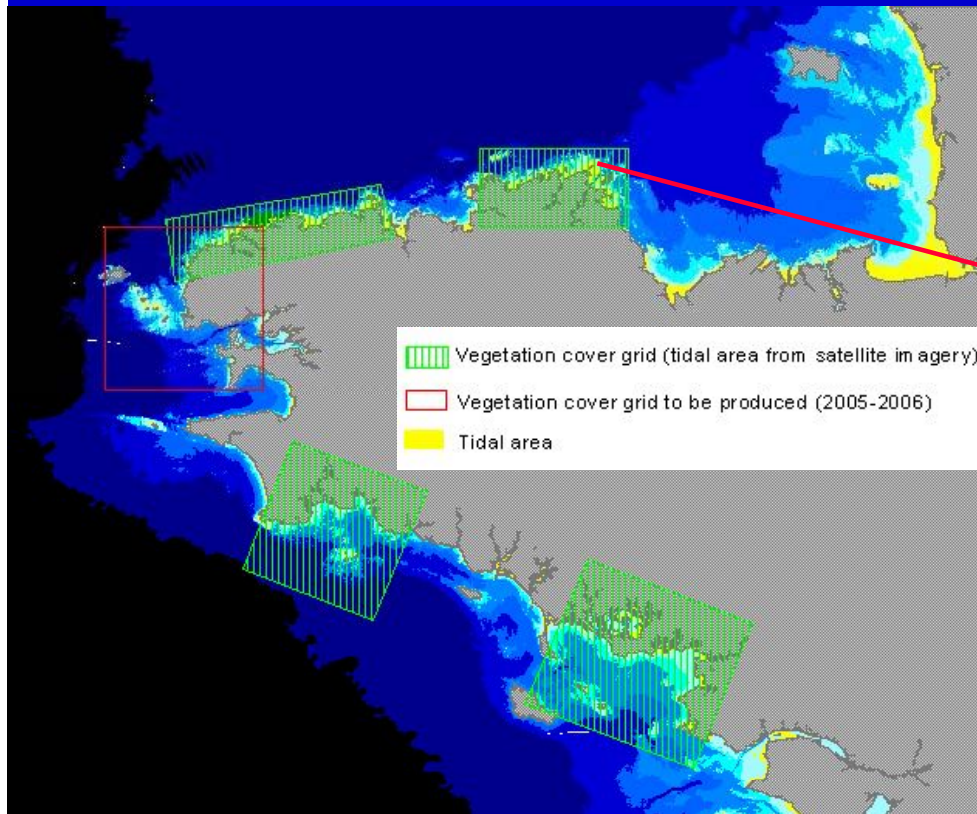
High resolution Habitat maps : recent studies (REBENT, MESH, Natura and PNEC)



Habitat maps : REBENT and MESH Projects (IFREMER)

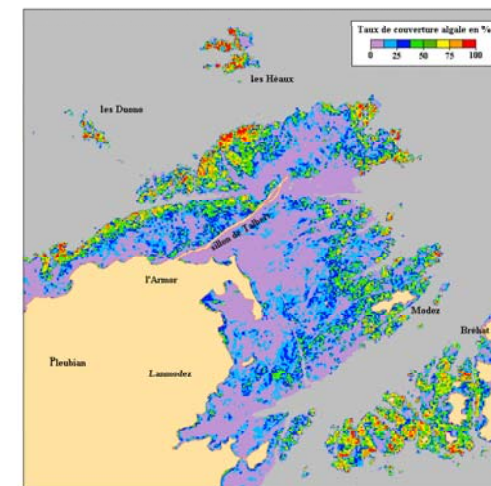
Vegetation cover

(recent datasets, high resolution)

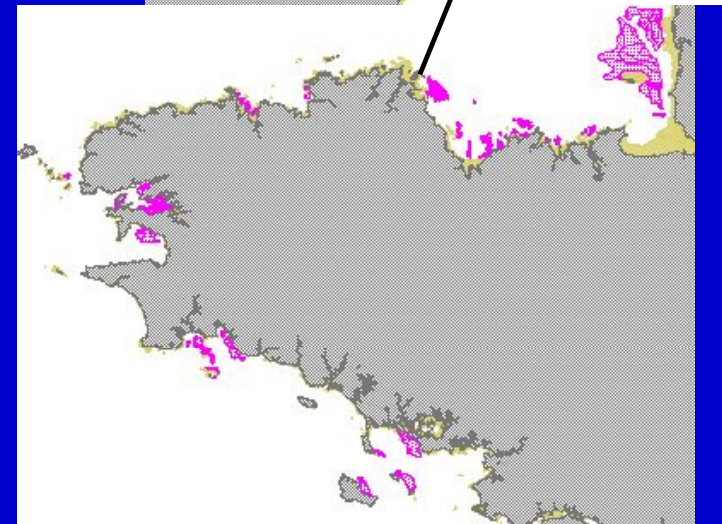
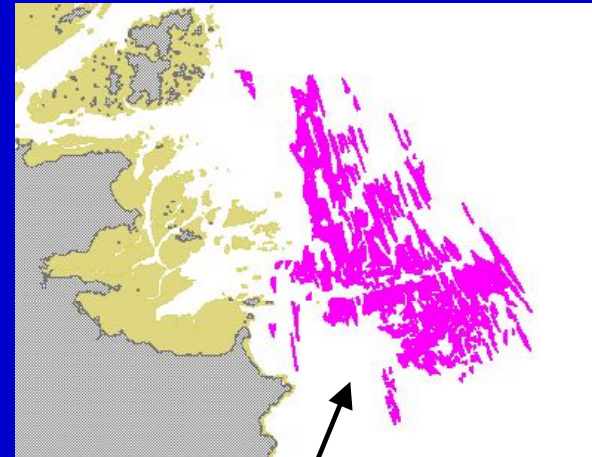
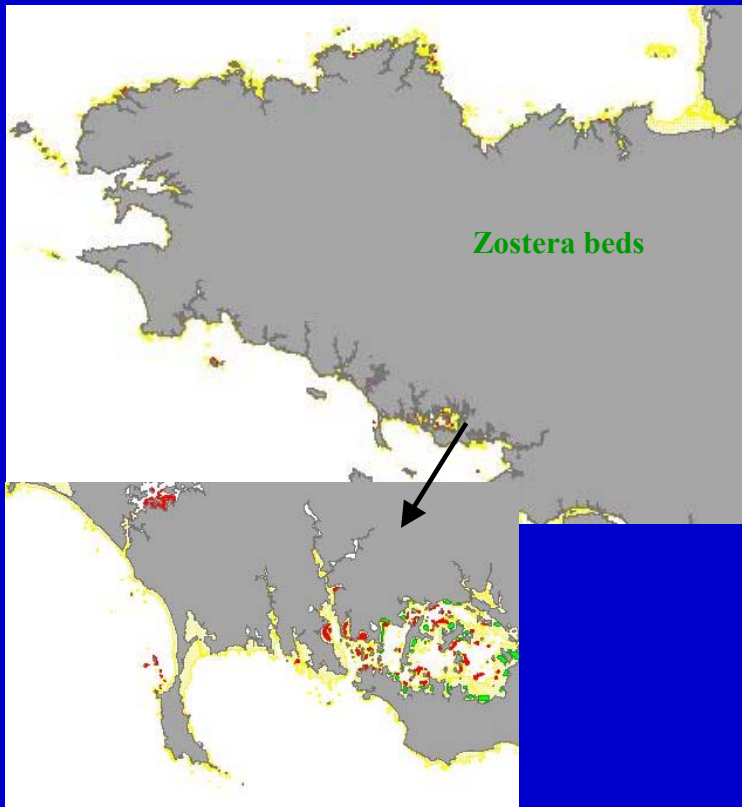


SPOT
Imagery

Vegetation
cover



Zostera and Maerl beds REBENT project



Rebent website : <http://www.ifremer.fr/rebent/>

The image displays a composite screenshot of the Rebent website interface. The main window shows the 'CONSULTATION DES CARTES' page with navigation options for 'Cartes de synthèse' and 'Cartes des biocénoses subtidales'. A detailed view of a map titled 'Les herbiers de zostères - Inventaire des sites (Bretagne)' is shown, including metadata such as 'Créateur : Produit REBENT IUEM-IFREMER-OPEN Bretagne' and 'Mets-clé : herbier, zostère, zostère marins, zostère morte'. Below this, a map viewer displays the 'Peuplements benthiques, abords de Roscoff (L. Cabioch, 1968) - Echelle : 1 / 50 000'. The map viewer includes a legend for 'Couches' (Layers) and 'Peuplements benthiques' (Benthic communities), with a detailed legend for 'Peuplements benthiques' showing various community types and their characteristics. The interface also includes a search bar, navigation tools, and a status bar at the bottom.