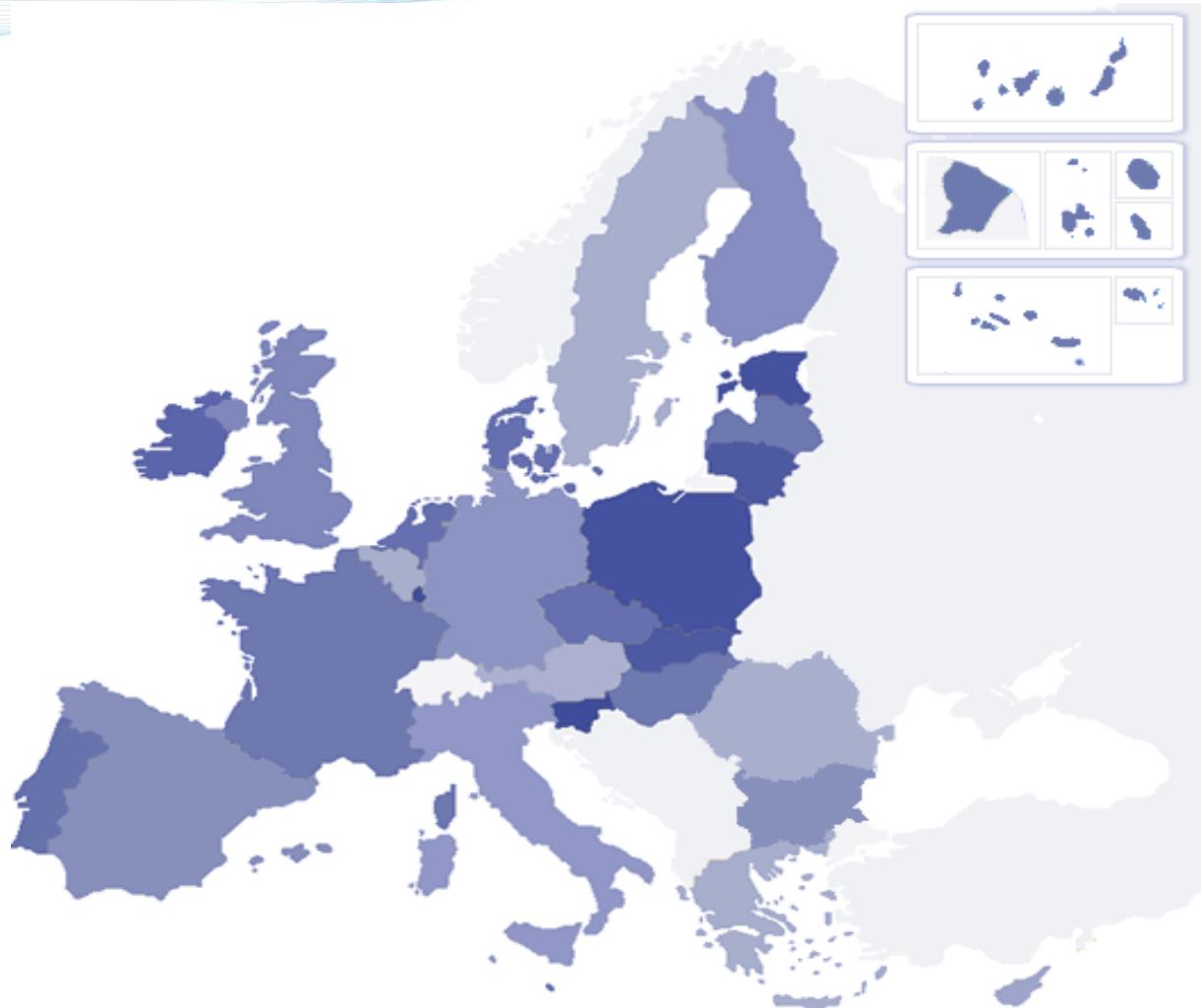


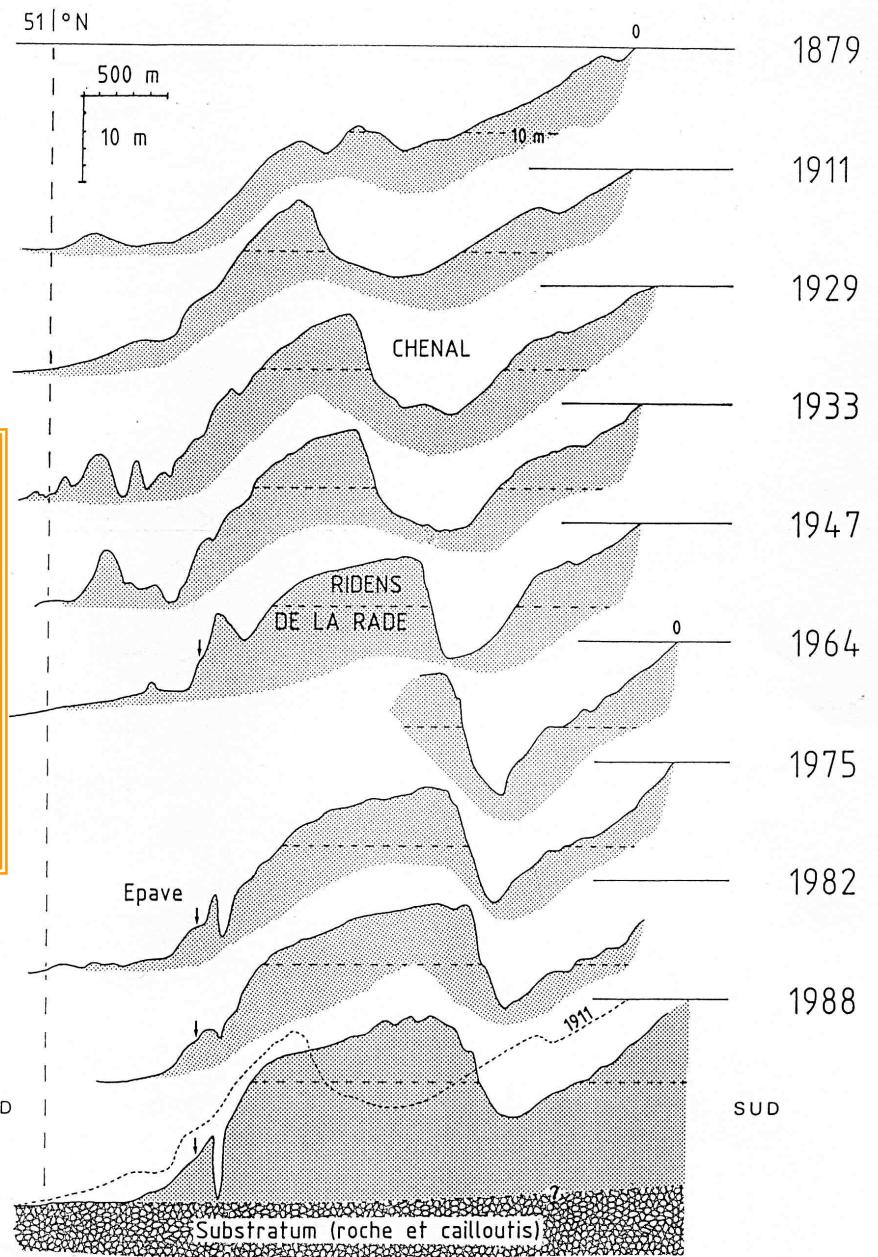
Marine dune dynamics



Dynamics of sandy dunes

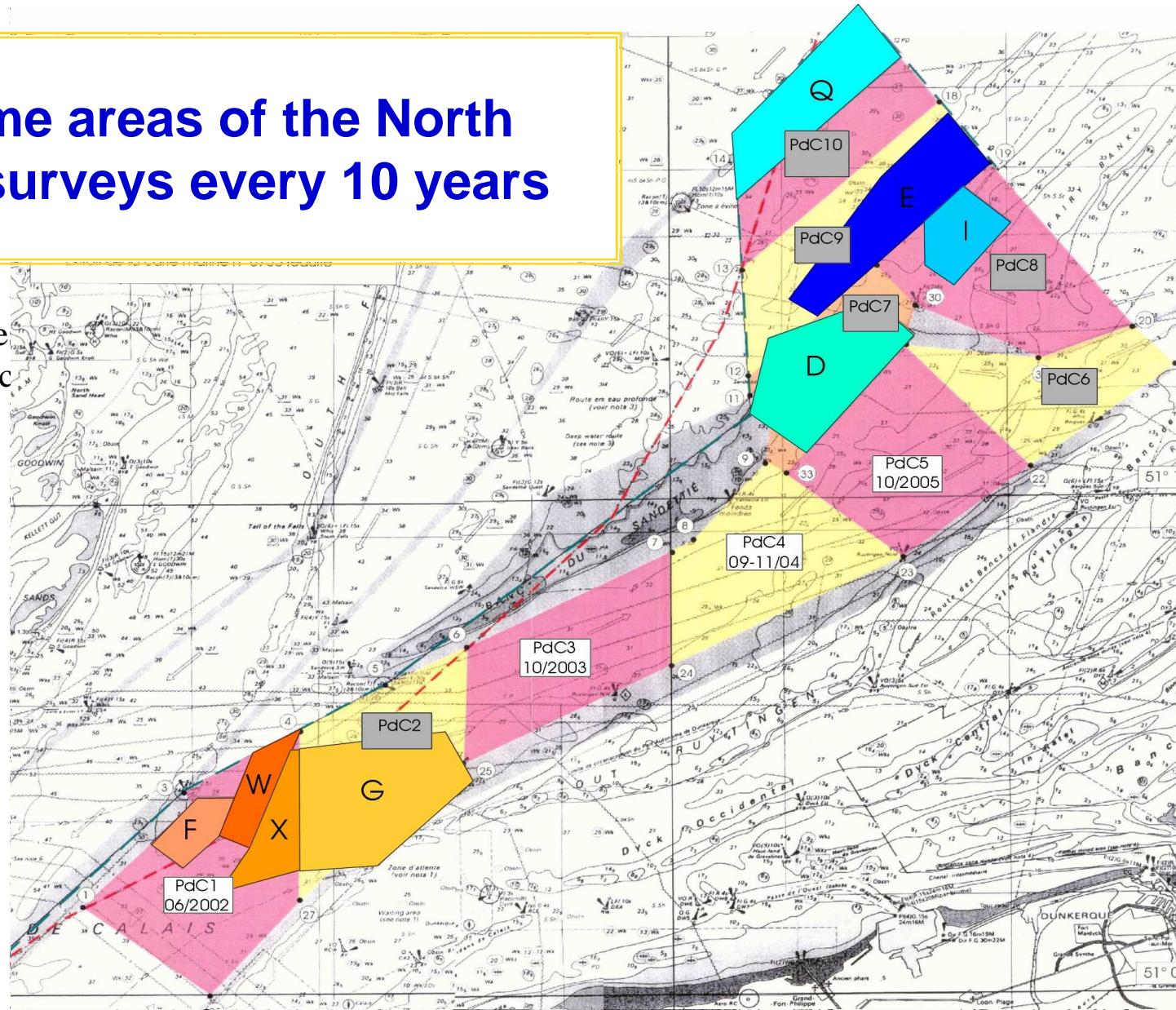
Jusque dans les années 1990 seuls les mouvements des bancs pouvaient être mis en évidence, par des mesures bathymétriques récurrentes

Dynamics of Ridens de la Rade (in the vicinity of Calais) 1879 to 1988, selon une coupe méridienne à 1°50'N.

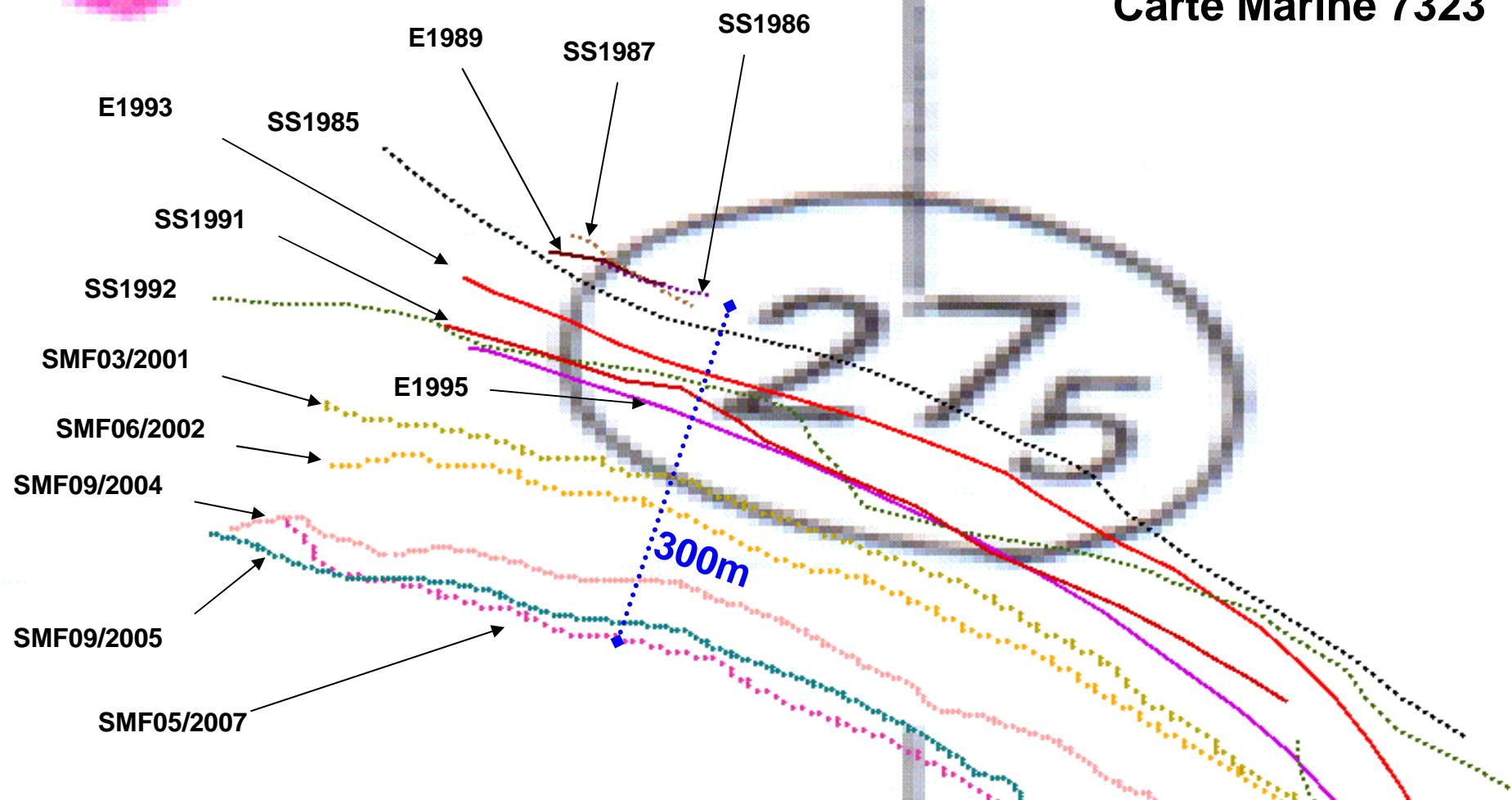


In some areas of the North Sea, surveys every 10 years

Limite à fort c

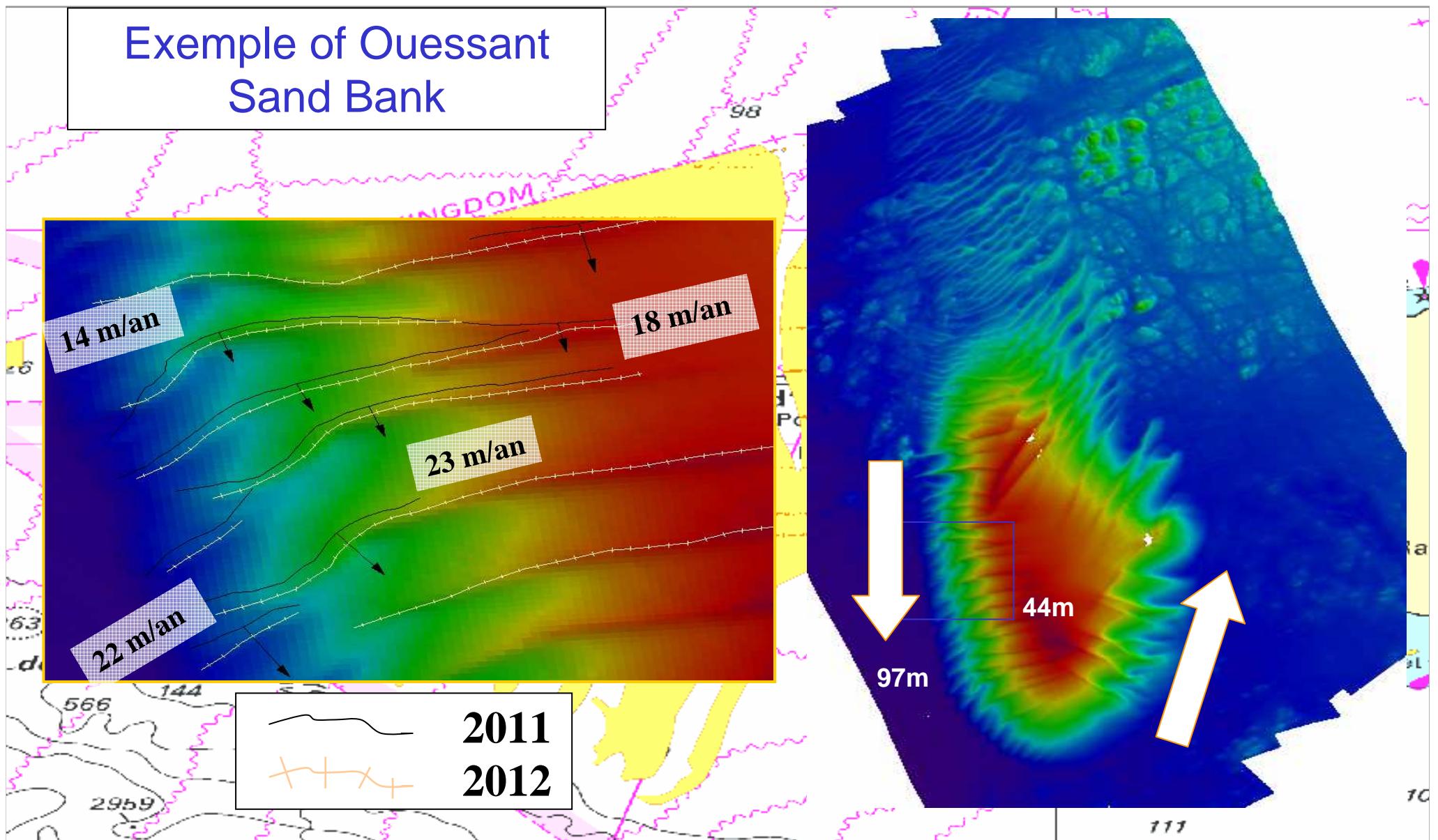


Carte Marine 7323



**Problème de la Sécurité de la
navigation dans les Zones à forte
dynamique des dunes**

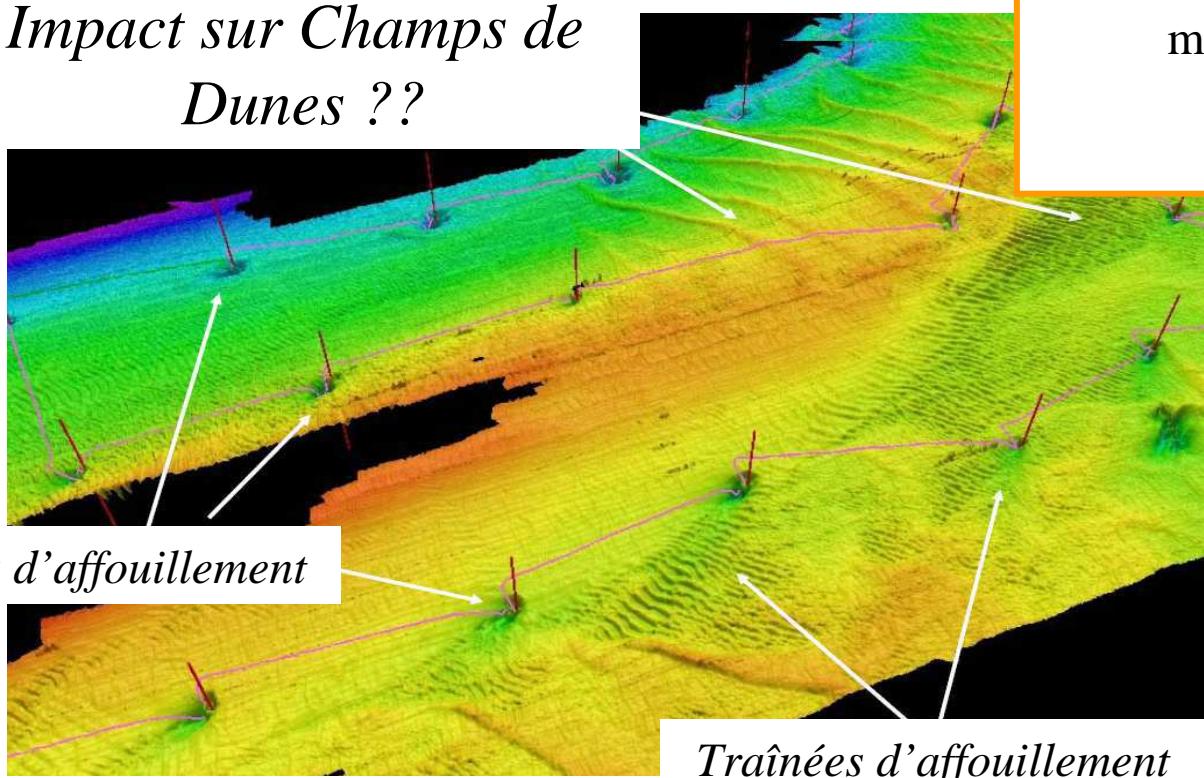
Exemple of Ouessant Sand Bank





Marine renewable energy

Impact sur Champs de Dunes ??



Au cours de ses différentes phases de vie, un projet d'EMR interagit inévitablement avec son environnement et modifie certains paramètres environnementaux.

A programme to build up, needs

Marine strategy framework directive
-habitats

Maritime spatial planning & coastal management
-coastal erosion
-consequences of wind farms

Safety of navigation
-Move of sand dunes

A programme to build up, gaps

Collecting data & making them available
(Emodnet)

Inspire standardisation

Research community (Marid conferences)

Not yet european programme

A programme to build up, action plan

A1: assess state of art

A2: assessing state of knowledge

A3: potential funding

A4: HOs willing to take part

A5: sketching organisational frame

B1: build research programme

B2: defining common policy on monitoring

B3 programme of work

C implement it

A roadmap to build up

Discussion on the roadmap, axis 4