

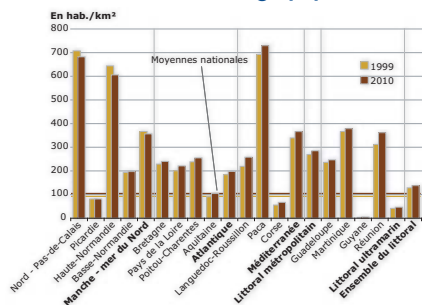
## The French Coastal Environment : Land use, coastal conservation, demographic pressure, risks and consequences of climate change

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### A high population density

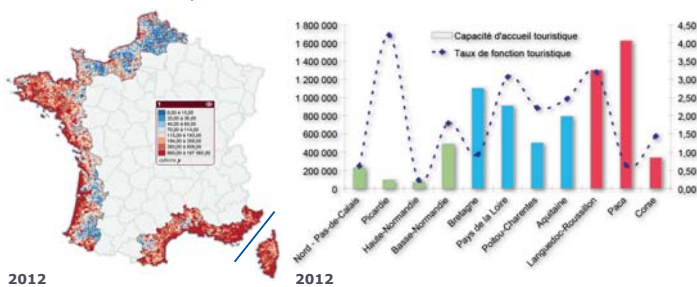


- About 7,5 millions people in coastal municipalities in 2010
- 5,8 millions on metropolitan coasts
- 1,5 millions in overseas french departments

- a population density of 285 inh./km², 2,5 times more than the metropolitan average
- more than 500 inh./km² in Nord - Pas-de-Calais, Haute-Normandie and Provence-Alpes-Côte d'Azur



### A high level of tourism Number of beds / nuts5 Indicators for tourism

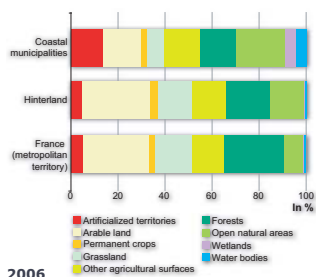


2012  
2012  
About 7,5 millions beds for tourists in coastal municipalities (secondary homes, hotels and camping) More than 8 000 beds per municipality

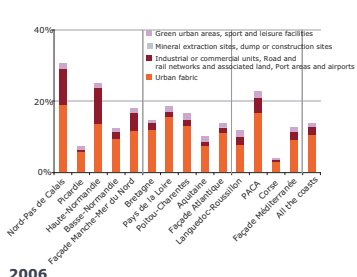


### Many artificial surfaces

#### Land use in France



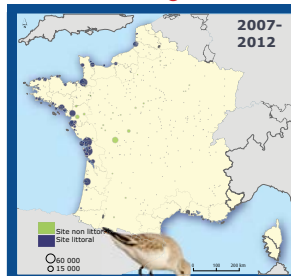
#### Artificialized surfaces on coasts



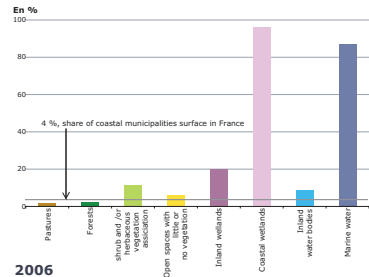
- more artificialized areas on coasts, especially in Nord - Pas-de-Calais, Haute-Normandie and Paca
- less arable land, pastures and forests, more wetlands and water bodies

### A great ecological wealth...

#### Ex 1 : wintering shorebirds



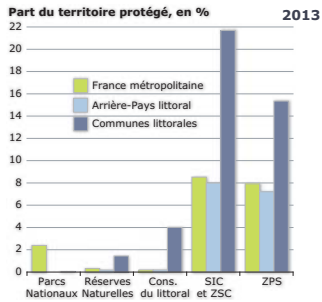
#### Ex 2 : Share of coastal municipalities for french natural areas surfaces



- Many wintering water birds, some of them are only living on coasts (Brant Goose, Sanderling...), as many protected plants.
- Several specific natural habitats : salt marshes, dunes, bare rock...



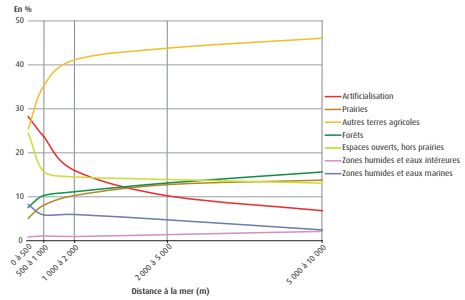
... And many protected areas  
**Proportion of protected metropolitan territory**



- National parks
- Natural reserves
- Conservatoire du littoral
- Habitats directive
- Birds directive

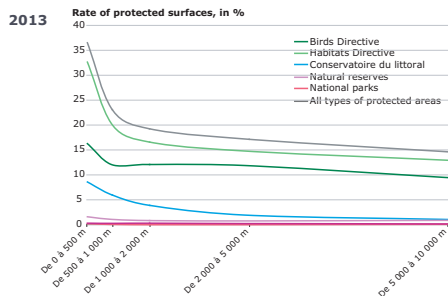
- the proportion of protected areas in coastal municipalities is higher in coastal municipalities than the metropolitan average
- > An answer to human pressure and ecological interest of the coasts

These indicators are stronger on the coastline (500 m buffer to the coastline)  
**Ex 1 : Land use and distance to the sea**



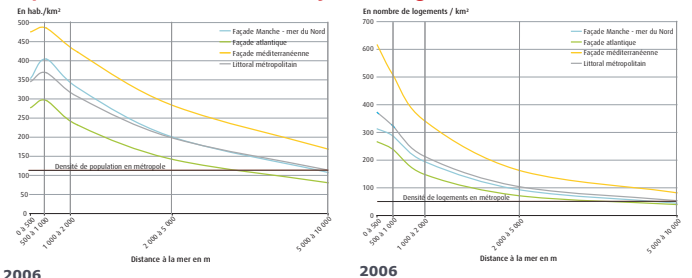
- Artificialized and semi-natural lands are more important near the coastline
- Agriculture is less important near the coastline

These indicators are stronger on the coastline (500 m buffer to the coastline)  
**Ex 2 : Protected areas and distance to the sea**



- The closer you are to the coast, the more important are the protected areas
- In a 500 m buffer around the coastline, all protected areas are covering 35 % of the territory

Coastal areas : many stakes and many specific hazards  
**Population and residences density according to the distance of the sea**



- Population and residences density are higher near the coastline
- With less than 500 m of the shoreline, residences density is 8 times bigger than the national average. The population density is 3 times bigger.

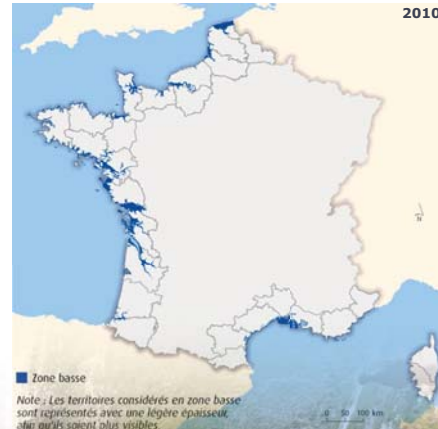
Coastal areas : many stakes and many specific hazards  
**Coastal erosion**



- 25 % of the coastline is concerned.
- Most of the coasts are beaches but also erodible cliffs (calcareous cliffs for example)



Coastal areas : many stakes and many specific hazards  
**Marine submersion**



- Maximum extend of marine submersion
- About 7 000 km<sup>2</sup>, 16 % are waterbodies



### Calculation of stakes

#### Costal erosion

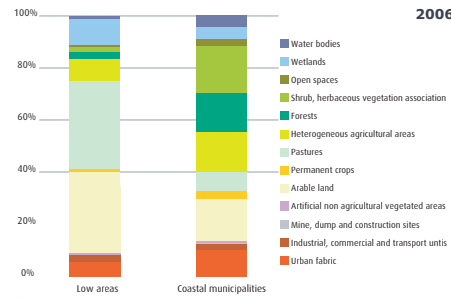
- a 250 m buffer around erodible coasts
- Model to calculate the number of inhabitants and residences
- About 140 000 inhabitants concerned in 2006 (+ 3 % between 1999 and 2006)
- and 155 000 residences in 2006 (--> secondary home), +7 % between 1999 and 2006

#### Marine submersion

- Maximum extend of marine submersion (areas lying below the maximum sea level - 100 years period)
- Model to calculate the number of inhabitants and residences
- About 850 000 inhabitants in 2006 (+1 % between 1999 and 2006)
- About 570 000 residences in 2006 (+7 % between 1999 and 2006)

### Calculation of stakes

#### Land use in «lowlands»



- Less artificialised areas
- More pastures and arable land
- Less forest and semi-natural areas
- More wetlands

### The french national Observatory for coastal zones and seas

Website : [www.onml.fr](http://www.onml.fr)



- National tool
- 3 partners : SOEs, Ifremer et AAMP
- Steering committee with many services
- works on metropolitan and overseas territories and seas
- works on the three pillars of sustainable development
- about 45 indicator factsheets, many studies and a Web cartographic tool (statistical and geographical data)