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Chambres régionales  
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# ***COASTLINE MANAGEMENT IN TIMES OF CLIMATE CHANGE***

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## THE CHARACTERISTICS OF COASTAL EROSION

- The coastal fringe is exposed to natural phenomena, whether marine or continental in origin, and is subject to human development interventions, which cause the coastline, **the boundary between land and sea, to advance (accretion) or retreat (erosion).**
- **10 % of the population of mainland France** is concentrated along the coastline, and even two to six times more in summer, **and 20% of the coastline is in retreat.**
- **Coastline movement has been going on for a long time and is generally gradual.** Its consequences, particularly when it takes the form of erosion, threaten people, property and activities located on the seafront. The threat **can be exacerbated when erosion is combined with coastal flooding**, two natural risks that interact.



# THE CHARACTERISTICS OF COASTAL EROSION





## KNOWLEDGE OF COASTAL EROSION IS STILL IMPERFECT, BUT IT IS ALREADY A CAUSE FOR CONCERN

The coastal erosion is now being accelerated by the consequences of climate change, in particular the increase in extreme weather events and the sea level rise (+ 1 meter in 2150 in the median scenario of gas emissions according to the 6th IPCC report of 2021).

Values for sea level rise in 2100 and 2150

Climate scenarios	2100	2150
SSP 1-2.6 (low emission scenario)	+ 0,44 m [0,33-0,61]	+ 0,69 m [0,46 – 1,00]
SSP 2-4.5 (median emission scenario)	+ 0,56 m [0,44 – 0,76]	+ 0,93 m [0,67 – 1,33]
SSP 5-8.5 (high emission scenario)	+ 0,77 m [0,63 – 1,02]	+ 1,35 m [1,02 – 1,89]

Source : the 6th IPCC report of 2021

**Technical and scientific difficulties** in developing projections of the retreat of the coastline fully integrating climate change : need to make an additional effort in research and development, in a French context where several public operators are intervening on this point, without sufficient coordination.



## KNOWLEDGE OF COASTAL EROSION IS STILL IMPERFECT, BUT IT IS ALREADY A CAUSE FOR CONCERN

- **The identification of the goods and activities affected by the retreat of the coastline and their economic estimates for 2100 are still very patchy and need to be improved.** : their value was estimated in 2019 between €800 million and €8 billion but this estimation only takes account of houses and not other threatened goods (roads, public buildings, companies, etc.) and **ignore the predictable sea level rise.**
- **A more reliable study** in the region of Nouvelle-Aquitaine (Bordeaux) quantifies goods and activities threatened in 2050 of 1.8 to 2.7 billions €. **Extrapolation** to all regions of mainland France : several tens of billions of euros at risk in 2050.



## AN INSUFFICIENT ANTICIPATION IN PUBLIC POLICIES

- At present, **risk projections are not sufficiently** integrated into **urban planning and development policies**. Many areas heavily affected by coastal erosion are still not covered by a coastal risk prevention plan (PPRL), meaning that **urban development can continue in areas at risk**. In addition, the PPRLs covering such areas **do not take account of the foreseeable rise in sea level and could therefore underestimate the risk**.
- The **'Climate and Resilience' Law of 22 August 2021** created a **new mechanism to encourage the integration of this risk into local authorities' planning policies**, but it now needs to be ramped up with the full support of these local authorities.



# AN INSUFFICIENT ANTICIPATION IN PUBLIC POLICIES

**Municipalities in mainland France most at risk from coastal erosion, not covered by a PPRL and not on the list of the 'Climate and Resilience' Law**



Source: Court of Accounts, based on Cerema data (April 2021)



## AN INSUFFICIENT ANTICIPATION IN PUBLIC POLICIES

- There is a **national strategy** to manage the risk of coastal erosion adopted in 2012 in order to push for **anticipation and adaptation** rather than build systematic defence against the sea through the construction of structures, but its **effectiveness is not really evaluated** via indicators,
- **At the local level**, only three regions et about 15 municipalities or municipal groupings have adopted a strategy : **this lack of territorial structuring** contrasts with the situation observed **on the English and Welsh coasts**, covered by 22 regional coastal management plans and 80 local strategies,
- Managing the risk of coastal erosion is still **too often treated on too small a scale**, that is municipalities, whereas **it should be at least municipal groupings**, closer to hydro-sedimentary logic.





## ADAPTING RATHER THAN COMBATTING: STILL A RARE CHOICE

- The historic method of intervention - **sea defence by means of structures** - is still favoured, to the detriment of a **genuine effort to adapt**, despite being encouraged through experimentation. There are **legal and financial obstacles** to the relocation of property at risk.
- **Expenditure on this policy**, which is largely co-funded and still moderate, **is sustainable today**, but **this will be different in the future because of climate change**. It's not possible to quantify it exactly given the monitoring tools available.
- The financial jurisdictions call for a **system of public funding** for coastline management **based on solidarity across coastal areas and on each local authority's own resources**,
- The financial jurisdictions have recalled that private property **must not be purchased by public authorities** without taking into account **their conditions of acquisition and their social utility**.