

# Le relevé du niveau des mers

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## SUMMARY

Marine cadastre: an analytical tool for risk management and land planning of vulnerable coastal zones

Floods, erosion and extreme weather conditions affect millions of vulnerable people in coastal areas around the world, major infrastructure, tourism and trade, and cause considerable human suffering and national economic losses.

For the coastal population, especially the poorest people, the risk of natural disasters and climate change is constantly increasing. Each year, an average of half a million people face the threat of floods and coastal erosion. These vulnerabilities are likely to be exacerbated by environmental degradation, natural disasters and climate change.

Globally, insurance companies alone have spent more than \$300 million over the past decade alone on storm damage to coastal areas. The compensation amounts are earmarked for the reconstruction of similar coastal infrastructure that remains vulnerable to storms and coastal flooding.

In West Africa, about one third of the population lives along the coast, home to abundant natural resources, which constitute an essential "coastal natural capital" for ecosystem services for coastal populations, marine life and national economies (the coastal zone contains 56% of West Africa's GDP). These coastal populations depend on fishing, animal protein and specific means to survive. Yet, the number of jobs associated with fishing is expected to decline by 50% before the beginning of the 2050s due to the decline in fish stocks.

In addition, coastal natural assets, ranging from fisheries to mangroves and lagoons, as well as the

sand of the beaches themselves, such as sand from the dune cordon, face considerable threats due to human intervention and the potential effects of climate change. Over the last quarter century, mangrove area has declined by 25 per cent, and the rate of erosion in some parts of West Africa has reached 30 metres per year. Coastal erosion and flooding have already had a negative impact and could further increase poverty. States have an important role to play in establishing dialogue with these populations on sensitive issues, such as the adoption of alternative livelihoods or voluntary resettlement.

Where coastal natural capital is adequately managed, ecosystems can provide a source of sustainable service flows that benefit both the marine environment and populations, such as the production of goods (fishing, etc.), tourism and recreational activities, and shoreline protection (e. g. to mitigate the effects of coastal flooding, create protective structures and stabilize the shoreline), as well as geographic planning for infrastructure development.

Comprehensive and reliable data are essential for understanding economic effects and measuring the value of coastal natural capital to support development decisions, infrastructure investments, human settlements and trade-offs between competing users. Without an integrated approach of biophysical, geographical, legal and economic analyses, the risk that inappropriate decisions will be taken and will not contribute, in the long term, to the sustainable development of this precious coastal environment and to poverty reduction is therefore high.

Hence, it is essential for development actors and decision-makers to have the right analytical tools at their disposal to underpin their development strategies in the context of natural and climatic risks, and to make the right choices to best manage the coastal natural capital on which populations and healthy economies depend.

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A marine cadastre could become a basic attribute of an integrated management system by providing a common database for legal boundaries, rights and restrictions. Such cadastral systems would provide a mechanism to integrate the rights, restrictions and responsibilities of all stakeholders with other environmental and economic data into a single system available to industries and governments. A property rights system, of which a marine cadastre would be the reference element for the location and physical extent (limits) of these rights, on a common positioning reference system, would have a major social and economic impact for offshore affairs by simplifying their administration, facilitating enforcement of rights (minimizing conflicts) and ensuring protection of property rights.

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