Elaborated in the framework of FRANCE22

POLICY PAPER

COASTAL ADAPTATION TO CLIMATE CHANGE:

HOW TO WORK WITH NATURE?

SUMMARY FOR DECISION MAKERS

Coordonnated by

RÉPUBLIQUE FRANÇAISE
Liberté Égalité Fraternité

Conservatoire du littoral

In partnership with

OCEAN & CLIMATE PLATFORM

Eurosite

Seas, Rivers, Islands Coastal Areas

CPMR CRPM

OCTA

This publication is a synthesis of the highlights of the Policy Paper produced for the event organised in Marseille in June 2022 under the framework of the the French Presidency of the Council of the European Union[1], which aimed to intensify cooperation between European and Mediterranean Coastal Agencies and other stakeholders, by developing common reflections and strategies on the adaptation of coastal territories to climate change.

The preparatory work was led by the Steering Committee coordinated by the ***Conservatoire du Littoral*** and including the ***Ocean-Climate Platform*** (OCP), ***Eurosite - the European Land Conservation Network***, the ***Conference of Peripheral Maritime Regions*** (CPMR), the ***Parliamentary Intergroup « Sea, Rivers, Islands and Coastal Areas »*** (SEARICA) and the ***Overseas Countries and Territories Association*** (OCTA), and with the collaboration of representatives from more than 30 European and Mediterranean organisations, listed in the full report.

INTRODUCTION

Adapting shorelines to climate change is one of the greatest challenges of our century, as coasts are exposed to most of the associated impacts: retreat of the coastline due to sea level rise, accelerated erosion in some areas, increased frequency and intensity of storms, coastal flooding, salt water intrusion making rivers and aquifers brackish, degradation of marine and coastal ecosystems.

The 2nd part of the 6th IPCC report (Territorial Vulnerability and Adaptation Measures) estimates that,coastal territories will be increasingly sensitive and exposed to chronic flooding and storm surges and by 2050, in the longer term (2050 to 2150) to an increase in salinisation, erosion and permanent flooding. The effects of climate change will pose existencial threats to islands, low-lying coasts and coastal infrastructure. The report also indicates that it is still possible to slow down climate change and make territories resilient, but the window for action is narrow and requires significant and immediate changes.

For several years, the need to adapt coasts to climate change has been included in the major international (Sustainable Development Goals 2030, Glasgow Climate Pact, etc.), European (adoption of a recommendation on the implementation of an integrated coastal zone management strategy in Europe, «Green Pact for Europe», etc.) and Mediterranean (Protocol on Integrated Coastal Zone Management in the Mediterranean, etc.) objectives. The French Presidency of the Council of the European Union for the first half of 2022 has made the fight against climate change a cross-cutting priority, committing in particular to continue implementing the strategy of the «European Green Deal» by strengthening measures to preserve and restore biodiversity and by promoting actions to tackle climate change carried out by farms and forestry companies.

1/ This event was not organised by the French Government. However, it is authorised by the Government to use the emblem of the French Presidency of the Council of the European Union.

ADAPTING THE DEVELOPMENT OF COASTAL AREAS

Developing a long-term planning strategy for coastal territories is necessary in order to make them resilient to the effects of climate change, considering the different impacts of these changes. Different types of adaptation responses to sea level rise can be considered: hard solution, soft solution, accommodation to reduce vulnerability, ecosystem-based adaptation and managed coastal retreat/realignment. These approaches should take into account different urban and economic settings such as: coastal cities, small and medium-sized coastal towns, small and large seaside resorts, seaside resorts with a city centre located in the hinterland.

Nature-based solutions (NBS), aiming to protect, sustainably manage and restore natural ecosystems in ways to address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits, are rarely taken into account in adaptation strategies, despite the benefits they provide.

The legal framework in the coastal zone does can be an obstacle to the implementation of climate change adaptation measures.

The dense urbanisation of this territory strongly constrains these measures. The definition of a no-build zone regime can make it possible to curb urbanisation in coastal areas, as in France, where the Coastal law has defined a 100m coastal strip that cannot be built on.

RECOMMENDATIONS

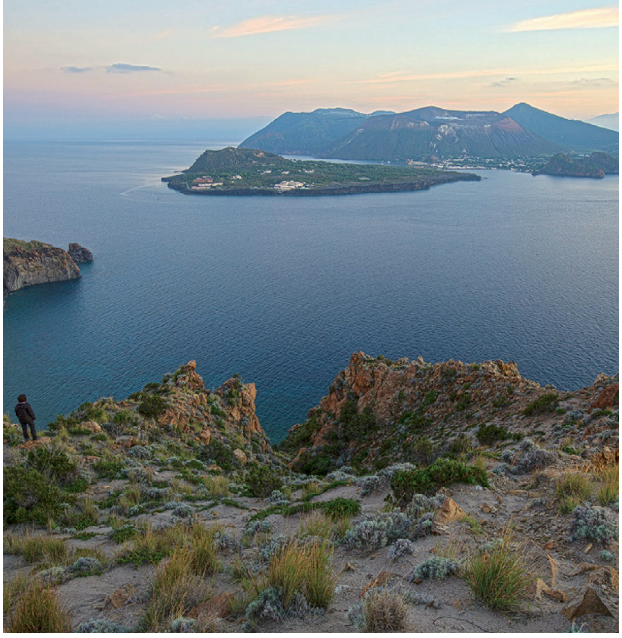
- Develop dynamic, hybrid and long-term coastal climate change adaptation strategy at a national, regional and local scale with short & medium milestones
- Implement coastal adaptation measures at the right scale
- Develop legal and financial tools to facilitate managed retreat of infrastructures and properties at risk in coastal areas
- Establish a streamlined administrative procedure for the implementation of measures to re-naturalise or restore natural areas
- Enable the development of strategies involving informed local communities to lead to long-term shared commitments

PRESERVING UNDEVELOPED AREAS IN THE COASTAL ZONE AND THEIR SERVICES

The natural, agricultural (non-intensive) or forest areas of the coastal zones provide many ecological, cultural and socio-economic benefits to the human population. They are home to a rich and varied biodiversity and provide a wide range of services: food and freshwater supplies, cultural and economic services, tourism and environmental awareness, and regulation with benefits for air quality, climate, water storage and quality, erosion protection and natural disaster mitigation.

RECOMMENDATIONS

- Implement action plans to stop the loss of unbuilt areas and to reclassify built-up areas into natural areas
- Define and better understand the natural areas in coastal zones to be protected and restored to adapt and cope with the effects of climate change
- Strengthen actions to restore terrestrial and marine coastal ecosystems
- Anticipate and adapt human uses in natural coastal areas



PROVIDING THE TOOLS AND FINANCIAL MEANS FOR COASTAL ADAPTATION

The implementation of adaptation actions in the face of climate change requires substantial funding giving the potentially profound changes required in these territories. The capacity for action of local and regional stakeholders in coastal areas depends on these financial issues. Spatial relocation due to coastal retreat remains rare and costly. The coastal erosion is considered as a gradual natural phenomenon that does not have the character of an exceptional event like a natural disaster and so, no general compensation scheme for damages exists.

RECOMMENDATIONS

- Generalise the financial evaluation of coastal ecosystem services as coastal protection mechanisms against the impacts of climate change
- Carry out a cost-benefit analysis of adaptation measures facing coastal risks integrating Nature-based solutions as well as socio-economic benefits and losses
- Promote the use of a multi-criteria analysis for adaptation actions in coastal areas
- Strengthen the financing of adaptation actions with Nature-based Solutions on a national scale
- Change the phasing or division of European credits
- Set-up financial incentives involving public authorities, banks, insurances to help enterprises and private landowners to adapt to climate change in areas at risk (flooding, inundation, etc...)

DEVELOPING SCIENTIFIC KNOWLEDGE

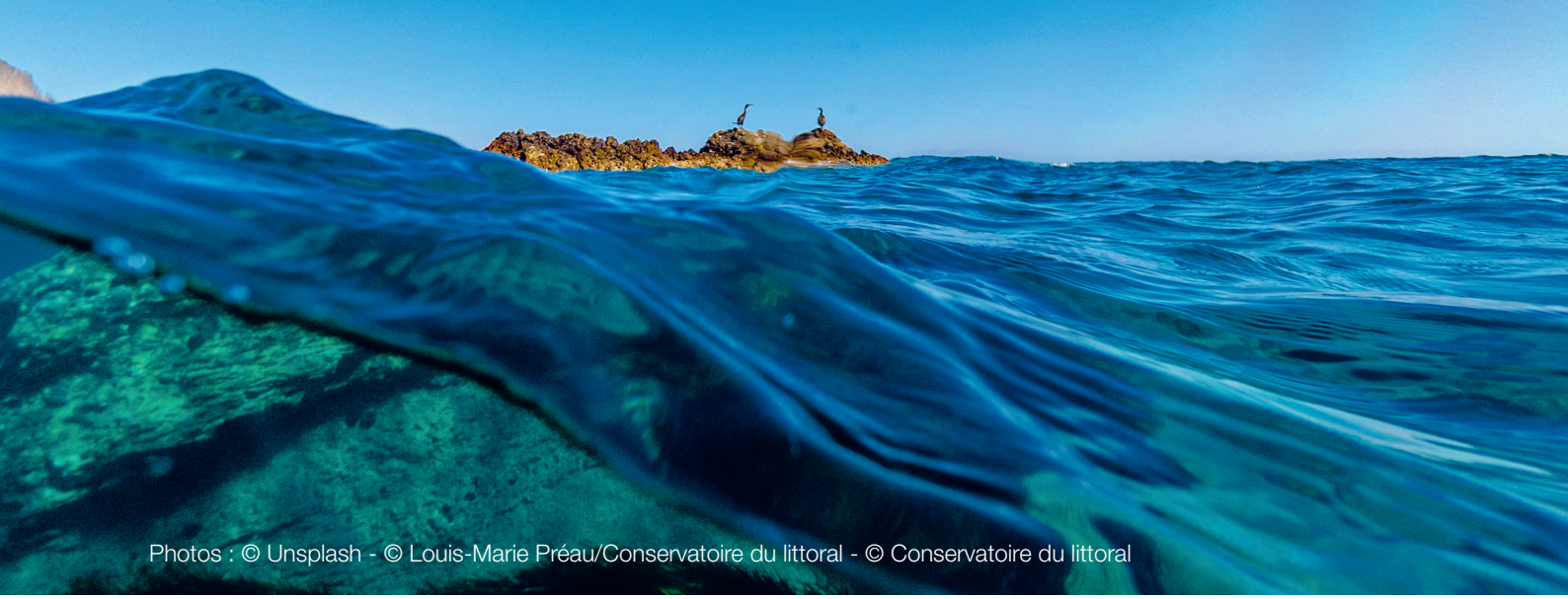
An approach to adapting the territory to climate change requires the most complete and precise scientific knowledge of the impacts on the coastal zone. Based on the sea level rise over the last few decades and of the climate change in the coastal zone, it is possible to plan regional and local projects that use these data and to subsequently implement appropriate adaptation actions.

Satellite observation of the coastline combined with in situ information and numerical models provides better information on sea level rise and its impacts, charting the evolution of sea level rise and enables to understand the decisive factors for sea level rise on a regional scale.

Monitoring and forecasting of coastal flooding events, notably linked to sea level rise and extreme storms, is becoming more and more crucial.

RECOMMENDATIONS

- Develop scientific knowledge on the impacts of climate change and on adaptation solutions at a regional and local scale
- Strengthen the collection and use of satellite, radar and in –situ data and to use different modelling tools for climate change evolutions based on historical evolutions in order to plan the adaptation actions to be undertaken
- Develop coastal observation on a regional and local scale with the establishment of coastal observatories
- Set up sharing tools on a European scale allowing scientists and various climate and coastal adaptation experts to share their knowledge and expertise
- Develop the use of participatory science in the context of coastal area observation in order to involve civil society in the development of scientific knowledge
- Make scientific data accessible to the widest possible audience for a better understanding of the effects of climate change in coastal areas
- Support the use of human sciences in the approaches for adaptation to climate change



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INVOLVING CIVIL SOCIETY: APPROPRIATION AND SOCIAL ACCEPTABILITY

People living in coastal areas are increasingly exposed to the effects of climate change: sea level rise, coastal erosion, flooding. The reflection of public decision-makers on spatial planning to create resilient coastal zones must take into account the implementation of adaptation measures but also the landscape aspects and the uses, particularly economic, of the coastline. The integration of civil society and all stakeholders in the territorial planning framework is important and remains a strong factor for success.

RECOMMENDATIONS

- Strengthen the integration of wider society in the process of co-construction of spatial planning projects related to adaptation issues and in decision-making
- Strengthen competences and awareness of the population in order to have a sufficient degree of awareness and knowledge of the past situation and the current state and dynamics of the coastline
- Disseminate information on the risks related to climate change to which the local population is exposed at different scales notably through public decision-makers
- Popularise scientific information on adaptation to climate change and conduct a territorial animation with awareness-raising workshops coupled with field trips in order to show wider society the adaptation measures undertaken

CAPITALISING AND COOPERATING BETWEEN COASTAL STAKEHOLDERS ON A EUROPEAN AND INTERNATIONAL SCALE

Sharing knowledge, strategies, approaches, good practices or even mistakes and tools allows to promote and strengthen respective experiences and know-how, in the framework of formal or informal collaborations (networks, exchange platforms), on a European and international scale.

RECOMMENDATIONS

- Strengthen cooperation between countries on a European or international scale within the same maritime façade or region (Atlantic, North Sea, Mediterranean Basin, Overseas territories) and join existing networks of coastal managers in order to cooperate with stakeholders on a similar scale on the subject of adaptation to climate change
- Use and support existing formal and informal networks and exchange platforms at European, international and regional level with the objective to achieve better adaptation to climate change
- Design cooperation projects at European, Mediterranean level, taking into account the specificities of the different States in order to allow for better adaptation to climate change on a case by case basis
- Continue to develop exchanges of experience and know-how between coastal stakeholders at European and international level and promote the creation of new coastal networks allowing better cooperation between stakeholders for learning and sharing of experience on the different topics of adaptation to climate change