



Adapting governance for coastal change in Portugal

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ABSTRACT

In many countries, but particularly in Portugal, coastal conditions are already endangered by flooding and erosion, both likely to increase as a result of climate change. This daunting prospect raises critical questions of sustainability; social justice; genuine public participation and social learning; effective financing for long term social and economic benefit; connected polycentric governance; and the appropriate use of scientific knowledge bonded to public and political trust. While the development of most shorelines is nominally shaped by public administrative action, rapid coastal migration and excessive economic concentration have turned many threatened coastlines into a stage for settlement hazard and institutional chaos. In Portugal, despite clear evidence of increasing flooding and erosion, appropriate management responses are proving inadequate, both in the turbulent planning framework and in the scarce financial provision for future safeguard. The only plausible alternatives seem to lie in the processes of progressive adaptive governance, involving the trust and full participation of local communities; strongly supported scientific assessments of threat and safety; and fresh approaches to finding suitable funding sources. However, as evident from interviews with key actors in coastal planning in Portugal, the lack of policy clarity and political will, the weak science and poor coordination of stakeholders, combined with the particular regenerating coastal cultures of these communities, make any organised adaptive approaches highly problematic. This consequently places more emphasis on the rich cultural meanings of coastal occupation; of national identity in a time of economic crisis; of social justice in a period of reduced coastal maintenance funding; and of a more measured and sequential approach to an adaptive coastal governance.

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Introduction

The coast is a meeting place, but also a separating zone. Land and sea coalesce but human managing institutions often splinter where the waves break. Throughout Europe maritime nations are reassessing their governance of the coast as budgets tighten, climate change continues, and coastal communities sense the storms of recession and the dread of possible abandonment of accustomed protection. While in the paper we concentrate on the particular experience of Portugal, we offer lessons and prospects for the wider European fellowship, particularly in the light of contrasting experience in England and The Netherlands.

Our purpose is to show that the governance of a changing coast is always adapting but patchily learning. We suggest that there is no obvious logic to any particular pathway of progressive adaptation in coastal governance. We argue that there are stages of learning and responsiveness, which create and recreate forms of adjustment. But we seek to make the case that these stages are neither sequential nor universal, and that the histories of cultural meaning and institutional bias account for much of the variable pathways of adaptive evolution. Thus in the Portuguese case, which forms the centrepiece of this paper, the reasons for adaptive convolution lie in the particular social, cultural and economic experience of the coast as an icon of pride, wealth, and pleasure; and the institutional and financial divisiveness between national strategic planning, local political identity, and powerful investment protectiveness.

We offer the following aims for this paper:

- To reflect on the Portuguese history of coastal settlement, culture and economy over the preceding 50 years, with continuous commitment to settlement for economic survival, lucrative tourism, and the joys of coastal living. This sets the case for a “cultural

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momentum” in favour of a viable iconic coast as a centrepiece of Portugal’s sense of modernity and attractiveness.

- To present the results of interviews with leaders of national and regional governing institutions, along with various experts, through which they reveal the constraints on their management effectiveness, and their views over possible future stages of adaptive coastal financing and governance.
- To assess the prospects for a progressive and ultimately more radical adaptive governance model, and the strong sociological challenges it poses, in a context of complex and persistent economic, social and climatic turbulence.

Adaptive coastal governance

Adaptive coastal governance recognises the need to address coastal risk through what Lubell (2005) terms the “vanguard of cooperation”. Huitema et al. (2009) and Olsen (2009) offer the most comprehensive reviews of the literature on adaptive coastal governance. Both stress the need for social learning achieved through progressive trust building and flexible evolution of networks of political and managerial competence. The purpose is to build resilient coping structures based on a common understanding of the science of coastal evolution, brokered by effective engagement of local interests and national perspectives on coastal change. This extensive dialogue amongst core interests needs to combine scientific analysis with the views on the scope for future coastal prosperity by those most affected by possible coastal change. This can best be achieved by processes of listening and learning through phased stages of conversation, so as to enable diverse views and expectations to be explored and reconciled. Equally important is consideration of the rights of residents and businesses to be safeguarded against avoidable economic losses due to lowered economic confidence and planning blight. These points are especially developed by Cooper and Mckenna (2008) and by Brunner (2010). Both teams emphasise the need to establish meaningful trust and to create and build upon cooperative social networks in participatory procedures, as well as politically and economically addressing social justice. Stringer et al. (2006) also point to the need for participatory efforts to be directed at the regulation of future settlement and development through more participatory planning procedures together with new, socially more fair, financing arrangements for coastal protection; and to provide time and space for progressive institutional innovation to take place.

In summary, from a reading of the relevant literature, we see that the key points for assessing any evolution of adaptive coastal governance require the following arrangements to be in place:

- *A credible science* for predicting future coastal changes, backed by broad scientific consensus, but also understood, reinterpreted, and ultimately supported by a wide array of local interests. This is a *cooperative science* and not a professional science, of a kind which is nowadays more generally accepted (see Jones et al., 2011 for a fully referenced review).
- *Evolving institutional capability by overcoming a lack of policy clarity and creating strong political will.* Supported by cooperative science, national, regional and local governments need to evolve collectively and creatively towards more comprehensive management arrangements with a view to establishing “polycentric” decision structures. Huitema et al. (2009), Olsen (2009) and Brunner (2010) are especially vigorous on this aspect, with Brunner identifying both case experience, and integrative approaches.
- *Clear goals* for identifying courses of action at various management scales backed by appropriately designed financing powers and accountable management procedures, all the time ensuring that participatory procedures are inclusive and meaningful (that

is, effective and guiding). Duxbury and Dickinson (2007) are very helpful here, as well as Cooper and Mckenna (2008).

- *Educational programmes* form an intrinsic aspect of the participatory process by raising awareness, building support, integrating discussions, and ensuring accountability. Kim Alexander and her Australian colleagues (2011) place much emphasis on the scope for learning through role playing and communicating through socially very diverse groups with very different starting points. The critical issue here is genuine respect and sensitivity to cultural aspirations and experiences.
- *Social trust and social justice* in the whole process, backed by social networks and schemes for building social and economic resilience so that there is continual recreation of social capital (linked to participation and equity considerations). Jones et al. (2011) look at the role of community support in creating the necessary trust to enable meaningful engagement to take place.

A framework for progressive adaptive coastal governance

On the basis of this review, we identify a framework for progression in adaptive coastal governance. This is not an absolute transition. It is a setting for critical analysis and possible future policy prescription, subject to procedures for institutional learning and sensitivity to coastal cultural histories.

Our framework begins with **recognition of risk**, the realisation that coasts need a policy framework of their own because they face increasing and unavoidable threat. This may be followed by preparing coastal governance for collectively understood **critical analysis** of the procedures of governing coasts. This process is sparked by cooperative science of coastal change together with research on various forms of coastal protection and realignment. The third stage lies in creating new institutional integration for **strategic intervention**. Here is where it becomes clear that the risk is more dominant and that present arrangements of institutional architecture, planning and financing are proving inadequate. Finally, we argue for an interconnected process of generating the political and public support for **proactive preparedness**, where serious attempts are made to reorganise the planning, financing, compensatory and participatory aspects of coastal governance into a more coherent whole.

This is a somewhat idealised evolution: there are few examples of all four phases being in place. Adaptation in coastal governance is a continuous process. It is not kick started with climate change and coastal erosion, neither of which is recent. It primarily lies in the history and sociology of coastal imagery and metaphor, as well as hard consumerist and developmental economics and politics (Dovers and Hezri, 2010; Adger et al., 2009; Milligan et al., 2009). The adaptive model has the potential to lead to a more democratically inclusive ways of planning, replacing the somewhat stale “consultation mechanisms”, still unimaginatively initiated by segmented institutions, with politically more elegant ways of coalescing interest groups around issues (van Koppen et al., 2008; Stojanovic and Ballinger, 2009).

To test this evolutionary four stage framework, we draw on the literature and the suggestions of Nicholson-Cole and O’Riordan (2009) in order to highlight the following criteria for our assessment: cooperative science; policy clarity, backed by reliable political will and coordinated, responsive institutional authority; and trust building, effective participation and social justice between stakeholders as the most important ingredients to address. We follow these prescriptions in our review of evolving coastal cultures in Portugal, as well as in our interview protocols of adaptive coastal governance in the country. But in order to explore the emerging strategic intervention stage, and to assess future policy developments on the Portuguese coast (proactive preparedness), we also consider wider issues of social justice by addressing more distributional outcomes via a deeper engagement of local

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