

Key discursive themes for the environmental governance of the Vouga Estuary (*Ria de Aveiro*)

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ABSTRACT

Over the past decades, at the same time that traditional activities declined, the *Ria de Aveiro* (the estuary of the river Vouga) has suffered strong development pressures (urban, agricultural and industrial), which have caused severe environmental problems such as water pollution, eutrophication, habitat destruction, among others. In particular, changes in the estuary's hydrodynamics are being increasingly seen as especially damaging to the *Ria*'s ecosystems, protected under the Natura 2000 Network. The dispersion of decision-making across 10 municipalities and various entities that have overlapping jurisdictions over the area has led to constant difficulties in finding coherent and articulated management solutions for the estuary's ecosystem as a whole. The *Polis Coastline Programme* — a governmental initiative of "integrated redevelopment and enhancement operations" in coastal areas — intended to address some of *Ria*'s most urgent problems with an integrated "requalification" strategy. However, as it becomes evident from the opinions submitted during the consultations carried out in the context of the respective Strategic Environmental Assessment (SEA), the concrete meaning of sustainability in this complex semi-natural system is far from consensual among the different participants, and is often in tension with the vision behind the planned interventions. In particular, the role that the port is seen to occupy in a sustainable future constitutes an important focus of dispute. In this paper, based on the analysis of written opinions submitted during the SEA consultations, we point out to key-themes in local discourses that dialectically interrelate in ways which ought to be considered by this territory's environmental governance.

KEY WORDS: *Natura 2000, Ria de Aveiro; transboundary environmental governance; SEA; discourse analysis.*

INTRODUCTION

Estuaries are, by definition, and in different senses, areas of interface. Ecologically, this leads to a high degree of variety in habitat conditions that typically makes them rich areas in biodiversity and, therefore, key for nature conservation. Socioeconomically, the diversity of ecological conditions, together with the fact that many estuaries have also become important interfaces for transportation, render them also rich and diverse areas for human activities. Because of the mutual boundaries they represent to one another, these different types of diversity have often accounted for difficult challenges to the sustainability of both ecological systems and the wide range of human activities in estuaries.

Due to its complexity, the governance of estuaries and water resources has attracted attention from various academic fields. In particular, contributions have insisted on the need to develop governance processes that emphasize both efficiency and conservation, establishing linkages between anthropogenic and ecological bases for making decisions (Brookes & Brandes, 2011). In addition, it has been argued for the need of new forms of governance, not only by focusing on the complexity of how the integrated management of water resources should effectively be pursued, but also by stressing the need for transforming state-centred approaches into more inclusive and pluralistic decision-making (Tropp, 2007; Tortajada, 2010). From this perspective, greater inclusion normally refers to a more adequate consideration of the inherent variety of interests, values and perspectives among the stakeholders of water

resources. In general, efforts toward greater inclusion in decision-making generally translate into greater emphasis on participatory and collaborative processes. This perspective has also been increasingly adopted by the European Commission regarding the drafting and implementation of the *Water Framework Directive* (WFD)¹ (Ridder *et al.*, 2005; Rauschmayer, *et al.*, 2009).

Research on the experience with participatory processes in the context of the EU multi-level governance of biodiversity and water resources has concluded that the outcome of such approaches is extremely dependent on context. On the one hand, this means that participation cannot be understood as a "discrete process from the continuously evolving wider governance context which could be a priori designed and controlled" (p. 19, Renn *et al.*, 2010). On the other, this means that successful approaches must be carefully adapted to context (GoverNat, 2010). In its turn, adaptation to context requires that the latter is known and understood as much as possible. Since discourse is at the heart of the social practices behind the tensions inherent to environmental governance, it is also a central part of its context.

In order to explore this dimension, we have argued that forms of discourse analysis may be instrumental in producing greater understanding about the representations

¹ Influenced by the *Aarhus Convention*, both the *Water Framework Directive* and the respective implementation guidelines gave participation unprecedented centrality in EU environmental policies (see Article 14 of the WFD, EC, 2003, Ridder *et al.*, 2005).

that authorities and local stakeholders have of specific environments, the narratives through which they make sense of their place and role regarding both social and ecological environments, and also the way local actors strategically use language in the structures that are socially available to them (Sumares & Fidélis, 2011). Indirectly, this may contribute to improve participation and conflict resolution, promote inclusion and emancipation, and for better overall policy design and implementation.

In this paper we will look at the case of the *Ria de Aveiro*, and highlight discursive themes that we consider important for the environmental governance of this estuary, giving special attention to the local management of water resources. As primary sources of data, our analysis has considered the consultations regarding the Strategic Environmental Assessment (SEA) of the *Strategic Plan of the Ria de Aveiro Coastline Polis*. The data includes both our detailed notes of a public hearing that took place as part of the consultation procedure, and the written opinions submitted during the institutional and public consultations. A full methodological account of the discourse analysis we have conducted can be found in Sumares (forthcoming)².

Section 2 provides an overview of the context of the SEA consultations through the description of the goals of this Coastline Polis Programme in regard to the estuary's current situation. Section 3 traces a participation profile and summarises in generic terms the content of the submitted opinions. Section 4 outlines what we consider to be key themes among the collected texts, whose implications for the estuary's environmental governance are discussed in section 5. Section 6 restates the main points of the paper and delivers some concluding remarks.

THE CONTEXT

The *Ria de Aveiro*

The estuary of the river Vouga corresponds to what is in Portugal known as the *Ria the Aveiro*, a wetland area of approximately 110 km², of which 60 km² is a permanently flooded lagoon (with other less important tributaries), surrounded by 10 municipalities with a total population of 300,000). With a recent origin, the current shape of the *Ria* has been shaped and stabilized by the communities around it over centuries, mainly through the creation of salt ponds, the draining of salt marshes, the opening of inlets and the dredging of canals to facilitate navigation, and the harvest of the lagoon's seagrasses to be used as fertilizers in local agriculture. After an acute socio-economic crisis caused by the clogging of the *Ria's* mouth which destroyed the sustainability of commercial navigation and of local economic practices, a carefully planned intervention fixed the *Ria's* mouth in 1808 and reversed the trajectory of what was an increasingly silted and choked lagoon with intermittent openings to the Atlantic Ocean.

The subsequent period of 150 years is often described as a time in which the different uses of the *Ria's* resources seemed to blend in harmoniously with one another in a state of equilibrium, contributing to the area's outstanding scenic beauty while preserving a diverse abundance of wild flora

and fauna (Amaral, 1968; Oliveira, 1988). Over the past 40 years, at the same time that the traditional activities that had shaped it declined, this fragile ecosystem suffered strong development pressures (urban, agricultural and industrial), which, in combination with the former, have caused some severe environmental problems as water pollution, eutrophication, habitat destruction, among others. In particular, the expansion of the port and related interventions has been increasingly seen as damaging to the *Ria's* ecosystems due to related changes in the estuary's hydrodynamics (see, for example, Carrabau, 2005). The dispersion of decision-making across 10 municipalities and various entities that have overlapping jurisdictions over the area has led to constant difficulties in finding coherent and articulated management solutions for the estuary's ecosystem as a whole.

Regarding the management of water resources, the recent past has been characterized by instability and institutional changes. For a long time, the estuary had been managed by port authorities in proximity with local actors. In 2002, most of the estuary came under the jurisdiction of the central administration via the Ministry of Environment. However, the transition did not include the allocation of adequate means, knowledge and know-how, and moved the *locus* of decision-making further way from the *Ria*, reducing institutional accountability and contributing to a period of inaction and disintegration of effective management. Since then, the responsible authorities of the central administration have undergone different reconfigurations. The most recent of these have translated in setbacks to ongoing attempts to bring decision-making closer to local stakeholders. In addition, the scale of the respective *River Basin Management Plan*, whose participation procedures were scarcely attended, seems to be too wide-ranging in order to accommodate the *Ria's* specificities with sufficient detail. It is hoped that the future *Estuary Management Plan* will address local particularities more closely, contributing to articulate norms between the different water uses and conflicting activities that depend on the former.

The Polis Coastline Programme

The Polis Coastline Programme — a governmental initiative of "integrated redevelopment and enhancement operations" in coastal areas — intended to address the *Ria's* most urgent problems with an integrated "requalification" strategy³. The area covered by the *Ria de Aveiro Coastline Polis* includes four Natura 2000 sites of which the most important is the *Special Protection Area (SPA) Ria de Aveiro*, which largely corresponds to the estuary of the river Vouga.

According to the *Strategic Plan*, through specific environmental studies and spatial interventions, the *Ria's Coastline Polis* attempts to contribute to three overarching goals: *An environmentally preserved Ria*, *An economically dynamic Ria* and *A Ria of multiple experiences* (PLRA, 2010).

The Strategic Environmental Assessment

The *Strategic Environmental Assessment (SEA)* is a recent but important procedure at EU level that has been strongly influenced by the requirements of the *Aarhus*

² This paper is based on the research developed for a doctoral thesis submitted to the University of Aveiro in November 2012 (Sumares, forthcoming).

³ The *Strategic Plan of the Ria de Aveiro Coastline Polis*, is one of the four priority *Polis Coastline Programmes* currently under way.

Convention on issues of public participation and access to information regarding environmental matters. The respective consultations are thus a central part of the procedure and are expected to affect the output of the decisions in relation to assessed plans and programmes.

The *Proposal for the definition of the scope* of the SEA was submitted in July 2009 for assessment to a set of institutional entities with specific environmental competences. In March 2010, the resulting *Preliminary Environmental Report*, along with the *Coastline Polis Strategic Plan*, were subjected to *Institutional Consultation* by the same group of institutions as in the scoping phase and, shortly after, to the *Public Consultation* procedure. In addition, a public hearing took place in April in order to present and clarify the *Strategic Plan* and the respective *Environmental Report*. After the consultation procedures were concluded, the *Final Environmental Report* was issued in May 2010 and, finally, the SEA *Environmental Statement* concluded the SEA process in November, setting the conditions for the plan's follow-up, in the form of *Foreseen Control Measures*.

PARTICIPATION PROFILE AND CONTENT SYNTHESIS

The number of submitted opinions during the consultations totals 44: 23 during the institutional consultation, 13 during the public consultation, and eight written forms delivered at the public hearing. Eleven stem from the Central Administration, 12 from the Local Administration, 3 from local associations, 1 from the local university (Aveiro), 1 from an environmental NGO, 3 from local companies, and 5 from individual citizens⁴.

Overall, contrary to what typically occurs in EIA consultations, the great majority of the collected opinions, rather than assuming a position in terms of being in favour or against the plan's approval, were mainly devoted to providing additional information and proposing corrections⁵. In our view this has to do with the fact that most participants of the institutional consultation had already participated during the scoping phase and where therefore mostly concerned about whether their suggestions or corrections had been taken into consideration in the *Environmental Report* and in the *Strategic Plan*⁶. This distinction also seems to account for the fact that the opinions submitted in the public consultations were more likely to express criticism and to solicit changes both in the *Strategic Plan* and the *Environmental Report*.

The most frequent criticism (in seven of the 44 written opinions) is related to claims about the negligence or incorrect assessment regarding the actual impacts that dredging and other interventions associated to the Port of Aveiro have had on the estuary's hydrodynamics. For different participants, such impacts threaten the global sustainability of the estuary and must, therefore, be addressed as a fundamental priority. This was also the main focus of criticism in the public hearing. Seven of the 14

interventions from the audience (mostly by municipal officials) referred the same issue, which constituted the main subject of five of these interventions. In addition, this topic has also occupied a prominent place in the consultations of other environmental assessments we have scrutinized⁷.

The discursive space that the problems attributed to port related hydrodynamic changes have been occupying in local discourses, and also the actual physical importance that the issue does seem to hold according to recent research⁸, have led us to consider more closely how the situation is being framed in the discourse of social actors.

In this regard, the main storyline depicts an idyllic past — where traditional socioeconomic practices coexisted symbiotically with thriving ecosystems — disrupted by physical interventions related to the port's expansion during the last 40 years, which that have led to the deterioration of this eco-socio-system. Accordingly, a sustainable future may be dependent on the reposition of previous hydrodynamic conditions. More than the variations of the storyline, we have focussed on striking thematic patterns.

KEY THEMES

Our exploration has identified recurrent themes (depicted in Figure 1 within continuous lines), which we understand as inter-related and self-reinforcing. Such themes and relations relate particularly to the discourse of actors that perceive themselves as most affected by the changes in hydrodynamics. If such relations are, in part, explicitly or implicitly established by the participants of the consultations in discourse, they also result from our interpretation from a comparative and transversal perspective over the opinions. The comparative exploration has allowed a more or less shared panorama to emerge, in which we find patterns of causal relations and associations between the different themes (see Figure 1).

Thus, the *necessity of reparation or reposition* regarding the current situations is felt with *urgency*, in face of the risk of irreversibility of the deterioration and the long wait for effective solutions. The manifestation of urgency is also related to the *fear of non-implementation* regarding the effective materialization of long-awaited projects and measures of impact minimization that may be bypassed without serious monitoring and control by authorities. Such fear is fed by a past of unimplemented projects, plans and measures. At the same time, this theme is also a consequence of a considerable degree of *mistrust in and between institutions*, which determines the way in which the responsibility for the negative effects is mainly attributed to the port's administration and to the responsible bodies of the central administration. According to some versions of this meta-narrative, such institutions (often characterized as incompetent and/or negligent), have not only permitted the interventions for the expansion of the port's activity throughout decades, but also failed to implement measures capable of preventing, cancelling or minimizing the negative effects of the mentioned interventions. At the same time, the studies that have been produced in order to justify

⁴ Excluding the written forms delivered at the public hearing that contained very short comments

⁵ This observation is based on our experience with EIA consultations.

⁶ In addition, many interventions had been eagerly anticipated by most local actors.

⁷ We are referring to five projects that were submitted to *Environmental Impact Assessment* and that were also considered in the PhD dissertation on which this paper is based on.

⁸ For example, Marinheiro (2008).

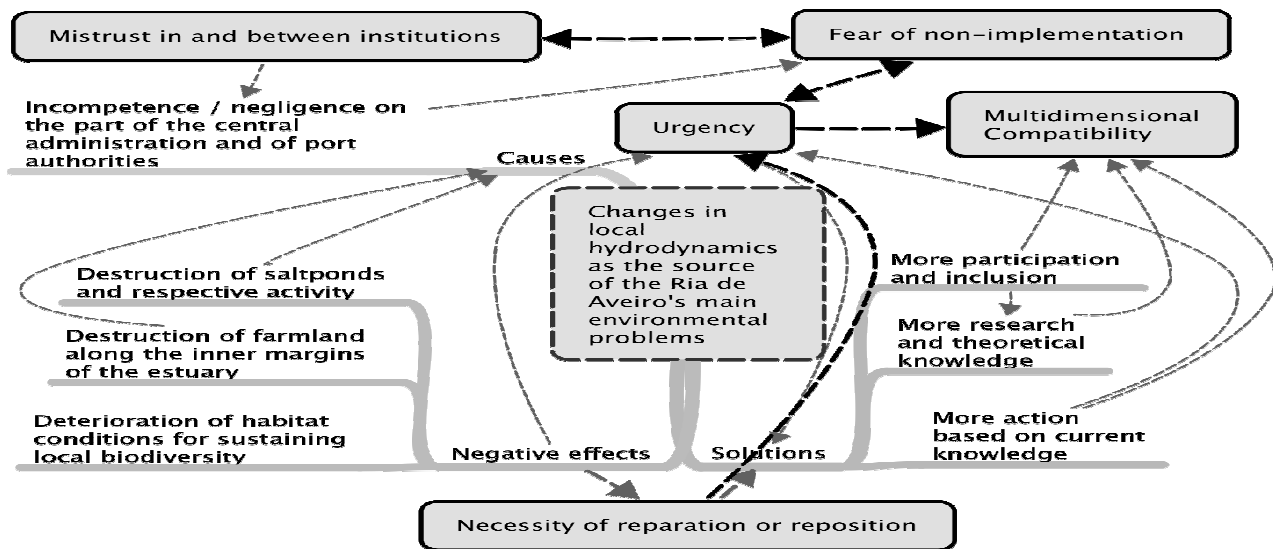


Figure 1. Conceptual relations between the main discursive themes.

intervention are depicted as incompetent (or biased) in face of the actual results and effects. The character of the responsible authorities, together with insufficiently inclusive decision-making processes, are represented as obstacles to what is generally considered to be the key to overcome the *Ria*'s environmental problems, i.e., an idealized notion of what we call *multidimensional compatibility*. This refers to the conviction that different interests and claims over the territory are, often through science and technical capacity, generically compatible. The insistence on the elaboration and implementation of measures that cancel or minimize negative environmental effects is, in our opinion, an expression of this theme. Solutions to the problems associated to the *Ria*'s hydrodynamics include claims for more inclusion in decision-making, the need for more studies and knowledge about this highly complex situation in order to act effectively.

In the discourses of participants, the relationships between the mentioned themes seem to be significant to both vertical and horizontal governance. On the one hand, vertical relations indicate tensions between central and local administrations. The former are represented by the latter as incompetent, untrustworthy or negligent, at the same time that the *Ria*'s main environmental problems are represented as transcending the municipalities' capacity for effective action. This has the effect of portraying a situation in which local governments appear as dependent, passive and impotent before a central government that is not sufficiently protective of local heritage. Municipal politicians often declare themselves willing and ready to cooperate with what they advocate to be adequate initiatives of the central administration but it is generally on the latter that the provenance of solutions is placed.

On the other hand, the data also suggests that horizontal relations are not free of tensions. Representations of parts of the *Ria* differ greatly according to different participants, mostly concerned with their direct interests. Since the mentioned negative effects and traditional activities at risk have a very uneven distribution between municipalities, this

leads to very different representations of the situation, which, in turn, may imply a fragmented and self-centered view of an ecosystem that needs to be managed within an integrated framework. More importantly, the way port authorities are characterized is also significant. They seem to be represented as a causative but relatively amoral agent. Although they are seen as the promoters of such interventions, the main responsibility is attributed to the central administrations. These, which are said to have approved interventions without being able to predict and prevent associated negative effects, are much more harshly characterized. Moreover, even the most outspoken critics do have not explicitly addressed the possibility of decreasing and containing the port's activity within "sustainable" limits⁹. The lack of serious questioning of the continuity of the port's current trajectory may be perhaps attributed to the port's symbolic power in the region, based on its glorious past, its centrality in underpinning the efforts to fix the *Ria*'s mouth, and its role as one most important economic sectors and local employer (see Amorim, 2008).

The current problematic of hydrodynamics is thus being differently "textured" by the participants of the consultations. Some are worried about hidden agendas and foregone decisions that are based on unreliable studies or reports. Others insist on a technocratic view of good environmental governance, concerned with the "perfect" consideration of policy. Some are expressing views that are more attached to the importance of collective identity symbols, while others want to assure "scientific accuracy" in order to act safely, whereas others still want to act while there is still time and opportunity to do so.

IMPLICATIONS FOR ENVIRONMENTAL GOVERNANCE AND WATER RESOURCES

The tensions visible in these themes raise many questions about the representation of risk, the attribution of

⁹ In some cases, however, this idea does seem to be implied.

governance responsibilities, how the reliability of scientific knowledge that is being produced is being measured by different actors and how priorities of investment and intervention are being negotiated according to different interpretations of space and the effectiveness of the governance setup that is being adopted. The local politicians had been included in the negotiation process, either represented through the local association of municipalities or through direct mediation. However, according to some officials, their claims have been discarded by the programme's *Administrative Council*, often criticizing the report/plan as if they had not had a say. Since, important actors in the context of the *Ria*'s local governance are expressing themselves in ways as to suggest a sense of exclusion, this may mean that decision-making is not effectively fulfilling procedural goals of inclusion and legitimacy.

In order to address these issues, efforts to improve and integrate the management of water resources in this territory, should ideally include participatory and collaborative approaches to decision-making. However, their success may be hindered by the recurrent themes we have identified. In particular, the lack of trust in involved institutions may be particularly corrosive in building a governance context conducive to social learning and the accumulation of social capital. In particular, these aspects should be considered in the future elaboration of the future *Estuary Management Plan*, which could constitute a crucial step in promoting collective action towards shared visions of sustainability.

CONCLUDING REMARKS

In the context of this discursive sphere, issues related to changes in hydrodynamics, the degradation of environmental quality of the estuarine ecosystem (including its biodiversity and the conditions for its conservation) and the salinization of farmland are especially salient. More specifically, the problems related to hydrodynamics are represented by a group of actors — including the elected officials of the most affected municipalities — as directly caused by port-related interventions and, simultaneously, as the most fundamental issue for the *Ria*'s (environmental and socio-economic) sustainability. Whether founded or not, such positioning assumes concrete forms that reflect effective discontentment, to which we associate a set of themes that suggest the existence of fragilities in the governance of this territory. These problems, of which the most damaging is perhaps a high degree of mistrust between and in the involved institutions, should be addressed in the context of the *Ria de Aveiro*'s environmental governance in order to find balanced solutions compatible with the objectives of the WFD, of N2000 and of socioeconomic development. Besides promoting deliberative and participatory processes appropriated to this context, i.e., able to accommodate and integrate the plurality of interpretations of particular places and, at the same time, able to overcome the mentioned tensions in their governance, achieving such objectives of the *Ria de Aveiro* may also imply initiating a serious and collective deliberation about the model of development that has been adopted for this territory and the place that the Port of Aveiro may, and should, occupy within it.

ACKNOWLEDGEMENTS

The research on which this paper is based was developed with the assistance of an FCT PhD. research grant (SFRH / BD / 37176 / 2007).

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