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Marine Planning for the Blue Economy

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Introduction

The island of Ireland, though physically small, faces a number of environmental, economic and institutional challenges for the delivery of a sustainable blue energy future based on the marine environment. Challenges stem from ecological resource limits, vulnerability to over exploitation and degradation, accumulative effects over time, and pressures arising from the perceived potential for new technologies, including renewable energy. These circumstances suggest the need to devise an appropriate planning and governance framework for the marine environment and its potential as a 'blue economy'.

Marine Spatial Planning (MSP) is becoming established as an integrated policy based approach to the regulation, management and protection of the marine environment. MSP is maturing – albeit differentially – to provide that required appropriate management framework for the marine environment. It is important to note that the pressures and constraints on the marine apply similarly to terrestrial and coastal contexts – and there are important cross-over or reciprocal relations between the different zones. Whilst land and coastal planning and governance arrangements have matured over time, however, although these are not necessarily exempt from criticism, the marine environment has not attracted the same political, policy and planning attention. Indeed, Claydon (2006) has argued that,

notwithstanding the increasing pressures on the marine environment, its planning, governance and management remains uncoordinated, sector specific and short-term.

The position is compounded by the separate governance regimes in Northern Ireland and the Republic of Ireland. Moreover, the fragmentation of different government departments controlling various functions across environmental planning and natural resource regulation creates another layer of concern. There are different institutional and organisational arrangements in place to secure land based planning, coastal management and the marine environment.

There are powerful challenges for the island of Ireland. First, the existence of two separate, variegated and fragmented land, coastal and marine planning traditions across the island of Ireland create a potential barrier to realising Ireland's ability to be a leader in offshore renewable energy and exports. Second, MSP and the blue economy cannot be separated from land based and coastal planning arrangements as these form intrinsic parts of a natural ecosystem. Here attention needs to be paid to reconciling the different planning and governance regimes. This could involve devising a 'pooled' sovereignty of horizontal and vertical integration to enable the island of Ireland develop a sustainable blue economy and promote renewable technologies to shape the future energy mix of the island of Ireland. The presentation acknowledges that whilst a single marine planning system or a marine authority is unlikely it advocates creating opportunities for improved and deliberate cooperation for an all-island strategic approach.

Social-ecological resilience – an integrated policy approach

The presentation draws on a particular understanding of the nature and characteristics of the marine environment – that of social-ecological resilience. This is advocated as an appropriate way of understanding the nature of the marine environment and in informing the management of vulnerable ecosystems under pressure and duress.

Social-ecological resilience represents the maturation of institutional and organisational responses to environmental crises. It builds on earlier concepts of resilience. Initially, for example, and reflecting the then prevailing understandings of people-environment relations and the availability of technology, an engineering resilience interpretation prevailed which reflected a concern with retaining a steady state equilibrium. There was an emphasis on returning to the original position following a shock to the system. It sought to minimise the recovery time after the environmental disturbance. The focus was on maintaining efficiency of function and control of resources in an optimal fashion – often through physical solutions such as the construction of coastal armour to prevent tidal incursions. The engineering

approach was overtaken by broader ideas associated with a concept of ecological and ecosystem resilience which offered the potential for addressing multiple equilibria. Thus flooding, for example, was seen as involving various social and economic considerations as well as physical engineering actions. There was a focus on devising an appropriate robustness in the response (mitigation) and an ability to withstand shock in the future (adaptation).

Building on these approaches a social-ecological resilience represents an integrative ethos which deliberately seeks to combine ecological and social (institutional) systems. There is an emphasis on adaptive capacity and securing transformative potential in preparing for the future. In other words, social-ecological resilience stresses the complexities of social, economic and environmental domains and seeks a more holistic, integrated response based on long term thinking (Lloyd, Peel & Duck, 2013). Its reasoning is that a shared understanding of development conditions and risks needs to be predicated on a sound appreciation of the inter-dependencies of natural processes and governance. In effect, its advocates a strategic, joined up or integrated response to environmental vulnerability.

For the purposes of this presentation, a social-ecological resilience approach argues that the blue economy has to be considered in terms of the complex and critical relationships between terrestrial, coastal and marine environments. It rests on the concept of a moving equilibrium in that change in natural environments is a constant and uncertain process (Peel & Lloyd, 2014). Hence the need for appropriately designed institutional arrangements to match such complex processes. This understanding assumes greater importance when the differentiated planning and governance arrangements, various scales of intervention and the impact of time and timing are taken into consideration.

The blue economy

The marine environment offers a rich source of natural resources which provide acknowledged and potential food and energy supplies. The challenges facing the marine environment are well documented (Ritchie & Ellis, 2010). Furthermore, the marine environment has a complex of property rights but in the main is characterised by common property regimes with international diplomacy defining sectors or zones for certain activities, such as fishing or offshore oil and gas. Its character, however, renders the marine environment vulnerable to over exploitation, as shown by the degradation of fishing stocks, and as a dump for waste and pollution. These create significant challenges to the carrying capacity of the marine environment with longer term implications for societies at large. The marine environment also provides important transport and other logistical benefits – such as electricity, natural gas and oil pipelines – and care needs to be taken to avoid unnecessary congestion of the resource. With technological advances, the marine environment is

increasingly the focus for offshore renewable energy developments – tidal, wind – with the construction of barrages to meet the needs of society. Balancing these considerations is important so as to avoid what is characterised as a potential “tragedy of the commons”.

Over and above this environmental baseline it is important to recognise that the marine environment represents an importance source of employment across a wide range of industrial sectors. It also has important implications for coastal based communities and settlements with the coast and sea locales, in particular, offering a range of opportunities for different groups– whether retirement or tourism centres (McElduff, Peel & Lloyd, 2013). Increasingly, the marine environment offers valuable spaces for technological innovation, particularly around renewable energy. This represents a step towards creating the basis for the future resilience and security of society.

A social-ecological perspective would suggest that it is necessary but not sufficient to consider the blue economy or the marine environment in isolation. It is important to acknowledge that the marine forms part of a wider ecosystem which includes the coast and land. The relationships between these domains are critically important and sensitive – as evidenced by coastal erosion, tidal surges, settlement patterns and the location of infrastructure which transcends land, coast and sea. The challenge then is to reconcile approaches across land, coast and the marine.

Parallel regimes for the marine environment

There are three broad points to be made. First, the marine environment is increasingly the focus of European Union and UK attention. This is a clear recognition of the importance and vulnerability of the marine resource and there is a portfolio of maritime policy and planning provisions being put into effect. The intention is that this will secure compliance with the EU context and, at a national scale, with the devolved nations of the UK.

Second, whilst there are developments in devising appropriate planning and governance for the marine environment across the island of Ireland these are not synchronised. In Northern Ireland, for example, the Northern Ireland Executive agreed to new marine legislation being put into effect. This is intended to balance environmental, social and economic needs and therefore, contribute to the sustainable development of Northern Ireland’s marine waters. The Marine and Coastal Access Act 2009 and the Marine Act (Northern Ireland) 2013 provide for a marine plan for Northern Ireland. It will involve stakeholder engagement and inter-departmental consultation. It provides for the designation of marine conservation zones. In contrast, in the Republic of Ireland, marine planning is less well advanced (Burns, 2013). The legislative focus is on the foreshore with less attention on the marine context. Developments

proposed for the foreshore fall into a de facto land use planning context and consent is granted by the Minister for the Environment, Community and Local Government if it is held by to be in the public interest.

Finally, and over and above the evolving approaches to marine spatial planning, the particular bifurcated and differentiated progress in Northern Ireland and the Republic of Ireland, there is the fragmented links between planning and governance of terrestrial and coastal with the marine environments. This represents another challenge to the future well-being of the blue economy.

Towards an all-island perspective for a sustainable blue energy future?

Both Northern Ireland and the Republic of Ireland have put in place modernisation and reform of local government and land use planning. This reflects political ambitions to devise more efficient, effective and transparent arrangements. Intrinsic to the institutional and organisational changes taking shape is the emphasis on integrated working – to secure efficiency gains in the administration and organisation of public service provision, policy formulation, and implementation. Here the idea of securing both vertical and horizontal integration - a ‘pooled sovereignty’ (Lloyd, 2008) may be of interest. This idea involves complex issues in reconciling vertical (multi-level) and horizontal (multi-dimensional) integration in public administration. This could apply in both Northern Ireland and the Republic of Ireland with respect to bringing together an ecosystem model for the blue economy which binds in the coastal and land based agendas.

A pooled sovereignty could embrace inter-jurisdictional arrangements for the marine environment. It is evident that Northern Ireland and the Republic of Ireland engage in discussions at both strategic and local scales over a diversity of common issues – recent discussions for example concerned falling milk prices, animal health, live trade in cattle and sheep and the Rural Development Programme. This type of agenda suggests that the strategic narrative is an important one. The benefits of such an approach have been recognised across the island of Ireland, however, as demonstrated by the publication and endorsement of the Framework for Cooperation promoting closer, co-ordinated thinking around terrestrial planning in Northern Ireland and the Republic of Ireland (Peel & Lloyd, 2014) which represents a new assertion of a spatial public diplomacy. The spatial planning statement does not involve a convergence of agencies, instruments and policies but a deliberate acknowledgement of the need to take the reciprocal conditions into account. This general thinking is appropriate to marine spatial planning for the purposes of Ireland’s blue economy which brings together land, coast and sea as a natural ecosystem.

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