

“Out of the Blue”: Integrating Land and Marine Planning for Coastal Community Resilience: A MARE People and the Sea Conference Session



Sitting at the edge of continents and islands, coastal communities link land and sea. Their economies and identities rely on the interconnections (Williams et al., 2021). The growing effects of climate change on shorelines and infrastructures and on marine ecosystems that support traditional livelihoods, e.g., fisheries, coupled with the introduction of new blue economy industries present significant challenges for managing activities in the marine space (O’Hagan et al., 2020; Singh et al., 2021). Local governments are responsible for planning and management of the land base and the economic and social well-being of coastal communities. Thus, these governments must integrate community and land planning practices with emerging marine planning requirements and climate change adaptation planning (Kidd et al. 2019; Walsh, 2021). Since climate change is creating considerable difficulties for established coastal land use practices and emerging industries are placing new pressures on coastal water access and use, local governments need to re-tool their development and planning practices. Higher level governments need to fully engage local governments in planning marine space and resource use (Manuel & MacDonald, 2020). Furthermore, both government levels need to leverage community-based civic engagement to ensure resilient responses to the compounding challenges of climate change and intensified use of marine resources and spaces.

The [11th 2021 MARE Conference](#), “People and the Sea,” offered a timely opportunity to explore the role of local governments in planning and managing land-sea interfaces to support community development and well-being. Coastal municipalities in Ireland, Norway, and Nova Scotia, Canada, are similarly challenged by climate change impacts and intensifying development of marine spaces. Municipalities in each country have well developed land planning systems, but differ in their authority to plan coastal and marine zones. The emergence of Marine Spatial Planning (MSP) has re-kindled debate about the quality of civic engagement in planning processes. Thus, this session considered the question: How can communities and local

governments leverage an integrative approach to land and marine planning for community development.

Six researchers (four presentations) covered community engagement in planning, drawing from recent critique of MSP processes in particular, and, outlined opportunities for local governments in different jurisdictions to connect land and marine planning for managing climate change impacts, marine development pressures, and fostering community development.

In the first presentation, “Supporting management of the blue realm: key elements for meaningful engagement of stakeholders in Marine Spatial Planning,” [Daniel Martinez Calderon](#), a Doctoral student, Dalhousie University, Halifax, Canada, gave an overview of a general critique of Marine Spatial Planning, namely, the often tokenistic stakeholder involvement in the planning processes, and then outlined five key characteristics of stakeholder engagement that can address the assessment.

In the second presentation, Dr. [Glen Smith](#), post-doctoral fellow in the Flood Hazard Centre, Middlesex University, London, UK, and Dr. [Anne Marie O’Hagan](#), research fellow, MaREI Centre, University College, Cork, Ireland, described their research “Policy coherence for climate change adaptation at the land-sea interface in Ireland.” They outlined the policy and planning contexts for coastal areas in Ireland and provided context through a case study of the town of Youghal, County Cork. Their work suggests that a lack of coherence between policy domains, and between marine and terrestrial planning systems, often acts as a barrier for meaningful local climate change adaptation at the coast.



Next, [Patrick Berg Sjørdahl](#), research scientist, Nofima (The Norwegian Institute of Food, Fisheries and Aquaculture Research) and doctoral student Tromsø, Norway, gave a presentation on “Integrating coastal climate change in municipal planning” (co-authored with [Ann-Magnhild Solås](#)). With examples from municipal planning in Norway, they showed how discourse on climate change adaptation and mitigation predominately focusses on terrestrial topics, while the coastal zone is predominately talked about

as an area for future industrial growth. Their presentation highlighted the need for more knowledge on coastal climate change made available for municipalities, as well as a more explicit focus on the role that near-shore marine waters can play in adapting to and mitigating climate change.

In the fourth presentation, [Monica DeVidi](#), Master of Planning graduate, Dalhousie University, Halifax, Canada, spoke about “Avoiding Planning Blues: Integrating local knowledge into a federal marine spatial planning process: Exploring the role for municipalities in Nova Scotia.” She presented results from a study that aimed to decipher new, or different, roles that

municipalities can play in marine spatial planning, since Canada currently does not have any formal plan to include these important stakeholders in the process committed for completion by 2024. This presentation concluded with suggested next steps for national staff and decision makers to consider as they proceed with marine spatial planning processes, namely, the importance of municipalities being made aware that MSP is occurring, that there should be clear indication of the role they will play in the process, and that the federal government should provide resources to support their participation.

This panel provided an opportunity for both the speakers and audience to think broadly about coastal area planning. Implementation of MSP could achieve more meaningful results if local communities are more actively engaged in decision-making than typically occurs in MSP processes. The ongoing effects of climate change emphasize that holistic approaches involving all levels of government are needed to enable coastal communities to build resilience and develop effective adaptation strategies. With their extensive experience with community engagement, local (municipal) governments can act as a bridge between coastal communities and national level authorities, which usually hold the jurisdiction and responsibility for implementing marine spatial planning. The case studies from Ireland, Nova Scotia, and Norway demonstrated that MSP would benefit from comparative analysis of MSP applications in different geographic regions. While local governance structures vary from one country to another, the environmental and economic development issues are similar and the solutions implemented by each country could inform governance and planning practices in marine nations.



Session presenters: top (l to r): Patrick Berg Sør Dahl, Patricia Manuel, Monica DeVidi; bottom (l to r): Daniel Martinez Calderon, Glen Smith, Ann Marie O'Hagan, Bertrum MacDonald (thumbnail)

This session was organized by Dr. [Patricia Manuel](#), School of Planning, and Dr. [Bertrum H. MacDonald](#), School of Information Management, Dalhousie University, Halifax, Nova Scotia, who co-lead the [Marine Spatial Planning research group](#) in the [Social Licence and Planning in Coastal Communities module](#) of the [Ocean Frontier Institute](#).

Further details about the MARE conference are available in the [programme booklet](#).

Abstracts of the Panel Presentations

Daniel Martinez Calderon, “Supporting management of the blue realm: key elements for meaningful engagement of stakeholders in Marine Spatial Planning”

Abstract: As a tool still in development, Marine Spatial Planning (MSP) is designed and used to support ocean and coastal management. However, it has been critiqued for often tokenistic stakeholder engagement during the planning processes. Calls for approaches that guarantee meaningful stakeholder engagement are common. In response to this critique, this presentation will outline key elements of stakeholder engagement to support the democratization of the MSP planning processes. An analysis of peer-reviewed and grey literature has identified five key elements of stakeholder engagement. 1. Benefits of stakeholder inclusion and the consequences of their exclusion. Inclusion results in quality improvement, understanding and minimization of conflicts, and legitimization of MSP processes. In contrast, exclusion generates poor communication; perceptions of deliberate exclusion; fragmentation of scale, governance, and space; and lack of specificity. 2. Stakeholder engagement principles. The best principles include fostering stakeholders’ empowerment, equity, trust, and learning; systematic identification of representative stakeholders; clear objectives; use of engagement methods tailored to decision-making contexts; use of highly skilled facilitators; integration of local and scientific knowledge; and institutionalized stakeholder engagement. 3. MSP stages and stakeholder inclusion. Stakeholder engagement should be implemented early and not restricted to specific phases. 4. Engagement methods and tools. Typical methods include surveys, interviews, workshops, and stakeholder committees. 5. Stakeholder engagement challenges, which encompass: a legal base for engagement needs to be established in each MSP initiative and stakeholder inclusion needs to be designed to empower stakeholders and draw on local government leadership. MSP can be strengthened by attending to these five elements and thereby help to overcome tokenistic stakeholder involvement. Planning processes and outcomes that achieve meaningful stakeholder engagement will result in greater understanding of the challenges facing coastal environments and communities and of the evidence contributing to solutions, trade offs, and decisions regarding sustainable policies, developments, and practices.

Glen Smith and Anne Marie O’Hagan, “Policy coherence for climate change adaptation at the land-sea interface in Ireland”

Abstract: Climate change is now a major driver of policies that govern socio-ecological systems, either for mitigation (to reduce causes of climate change) or adaptation to the changes that are occurring or forecast. One area where climate adaptation policies are proving difficult to design is at the coast. On the one hand, some of the most severe impacts of climate change are being recorded at the coast – especially through erosion and flooding – whilst on the other hand, these areas represent complex land-sea planning and policy interfaces. This paper analyses the coherency of policies along Ireland’s coast from a climate adaptation perspective and applies elements taken from an Organisation for Economic Cooperation and Development (OECD) framework for sustainable development to a coastal case study. Results show there are some reasons for hope that coherent policies for climate adaptation at the national level can be transposed to the regional and local level on Ireland’s coasts. However, many policies are developed in an ad-hoc fashion around the needs of single sectors. This

analysis could be used to elucidate more collaborative and coherent ways forward for managing the coastal zone in Ireland in the context of climate change, especially through integrated planning.

Patrick Berg Sjørdahl and Ann-Magnhild Solås, “Integrating coastal climate change in municipal planning”

Abstract: Planning is hailed as one of the main tools for responding to climate change in Norway, and the municipalities are given a central role, as they are the main planning authorities, also for the near-shore marine space. Climate projections predict that the coastal climate in Norway can be expected to change considerably during this century. With increased ocean temperatures, rising sea level and worsened storm surges, coastal communities will be heavily impacted by climate change. Thus, due to their proximity and dependence on the coast and their authority as planning body, coastal municipalities and local decision makers are at the frontlines of adapting to and mitigating the effects of coastal climate change.

However, even though national expectations state that climate change consideration must be given higher priority in the planning system, there are indications that this is challenging. Our preliminary mapping suggests that there seems to be a lack of integration between municipal climate adaptation plans and municipal coastal zone plans. Moreover, there seems to be a lack of concrete adaptation and mitigation measures in the coastal zone, at least when compared to terrestrial planning where measures are ample. This gives rise to questions of whether national expectations for local planning are met, and whether the potential of municipal planning for coastal climate change is being fulfilled.

In this paper, we investigate local governmentalities in planning for climate change in the near-shore sea space. How is coastal climate change framed and problematized in national, regional, and local policy making? What practices are discourses on coastal climate change producing? How are these practices formed, reformed, and resisted as they move down through governmental hierarchies, from national to regional to local planning? Which technologies do municipalities employ to achieve their goals regarding planning for climate change?

Monica DeVidi, “Avoiding planning blues: Integrating local knowledge into a federal marine spatial planning process: Exploring the role for municipalities in Nova Scotia”

Abstract: Canada has decided to pursue Marine Spatial Planning with an active agenda to complete plans in five bioregions by 2024. Marine Spatial Planning is mostly an activity of senior governments. Coastal communities will be impacted by decisions about marine management, but there is no articulated involvement for coastal municipalities in the process, even though they provide local knowledge and planning protocols, including public participation, that could lead to support for marine plans by people who will be most affected by the outcomes. This presentation reports on a study that explored the role for municipalities in Marine Spatial Planning, using Nova Scotia as a case study. Opinions about municipal involvement in Marine Spatial Planning were sought from representatives of municipal, provincial, and federal government departments and non-governmental organizations. While the views about the purpose and processes of Marine Spatial Planning varied among the

participants, all saw the need to obtain input from every level of government. The results also suggested that there is limited knowledge about Marine Spatial Planning among municipalities and a weak understanding of what role they can play, as well as skepticism about what senior government understand about their role in planning and what they could offer to the process. If the purpose of Marine Spatial Planning is to facilitate sustainable, marine management while promoting a blue economy, coastal communities should be primary beneficiaries of a plan. The ocean and the land are not separate – coastal communities occupy the land-sea interface – yet, as many interviewees pointed out, oceans and land are often separated in planning processes. This presentation will conclude with consideration of how Marine Spatial Planning in the Nova Scotia context can promote more opportunity for local government in marine sector decision-making that will lead to better marine plans with local relevance and connections across planning systems.

References

- Kidd, S., Jones, H., & Jay, S. (2019). Taking account of land-sea interactions in marine spatial planning. In J. Zaucha & K. Gee (Eds.), *Maritime spatial planning* (pp. 245-270). Springer International Publishing. https://doi.org/10.1007/978-3-319-98696-8_11
- Manuel, P., & MacDonald, B. H. (2020). Local governments and coastal communities are more than “stakeholders” in marine spatial planning. *The Journal of Ocean Technology*, 15(2), 128-129. https://www.thejot.net/article-preview/?show_article_preview=1172
- O’Hagan, A. M., Paterson, S., & Tissier, M. L. (2020). Addressing the tangled web of governance mechanisms for land-sea interactions: Assessing implementation challenges across scales. *Marine Policy*, 112, 103715. <https://doi.org/10.1016/j.marpol.2019.103715>
- Singh, G. G., Cottrell, R. S., Eddy, T. D., & Cisneros-Montemayor, A. M. (2021). Governing the land-sea interface to achieve sustainable coastal development. *Frontiers in Marine Science*, 8, 709947. <https://doi.org/10.3389/fmars.2021.709947>
- Walsh, C. (2021). Transcending land–sea dichotomies through strategic spatial planning. *Regional Studies*, 55(5), 818-830. <https://doi.org/10.1080/00343404.2020.1766671>
- Williams, N. E., Sistla, S. A., Kramer, D. B., Stevens, K. J., & Roddy, A. B. (2021). Resource users as land-sea links in coastal and marine socioecological systems. *Conservation Biology*, *cobi.13784*. <https://doi.org/10.1111/cobi.13784>

Authors: Monica DeVidi, Bertrum H. MacDonald, Patricia Manuel, Daniel Martinez Calderon, Ann Marie O’Hagan, Glen Smith, Patrick Berg Sør Dahl, and Ann-Magnhild Solås

Acknowledgements: Funding for the Canadian participants in this session was provided by the Ocean Frontier Institute. The panelists and session organizers acknowledge with thanks the opportunity to participate in the MARE 2021, People and the Sea, conference.

Image credits: Photographs, Halifax, Nova Scotia harbor (Daniel Martinez Calderon); Nova Scotia coastal beach (Monica DeVidi); map (Sian Powell)

