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Making Room for Wetlands – Implementation of Managed Realignment and Salt Marsh Restoration to Enhance Resilience of Dykeland Communities to Climate Change Impacts in the Bay of Fundy, Canada

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The protection, restoration and use of vegetated coastal habitats in eco-engineering solutions for coastal protection are increasingly being accepted as providing a promising strategy, delivering significant capacity for climate change mitigation and adaption. In some cases, managed realignment of dykes, providing space for dynamic coastal movement and the reversion of natural wetlands back to their original state have been identified as a viable conservation and adaptation method to current and future risks associated with climate change; thereby reducing dyke maintenance costs and re-directing resources to areas of greatest need. This implementation however is not without its challenges and there is a lack of demonstrated, well-documented success outside of Europe. While previous efforts to restore coastal wetlands in Atlantic Canada focused primarily on the restoration of resilient and self-sufficient habitats, the increasingly tangible impacts of climate change combined with changing economic landscapes, regulations, and land use practices have shifted and broadened the objectives of these projects. In addition, social, historical and cultural components of the landscape and stakeholders are increasingly needed to be integrated into project design and implementation, thereby increasing their complexity. The Making Room for Wetlands project is building resilience to climate change impacts of dykelands in the Bay of Fundy, Canada by developing a framework for implementing managed dyke realignment and demonstrating the success of these strategies. Demonstration sites were selected in collaboration with the Provincial body responsible for dyke maintenance, after a comprehensive dyke vulnerability assessment and builds upon over a decade of collaboration and experience in tidal wetland restoration. Completed and on-going managed realignment projects in Nova Scotia will be used as a framework for a discussion on the challenges and opportunities presented for coastal habitat restoration for climate change adaptation and 'making room for wetlands'. The design, implementation and monitored restoration trajectory at multiple sites (Onslow-North River, Converse, Cornwallis, St. Croix and Belcher St. Marsh) will be presented to inform feasibility and design of future projects.