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Transcending sectors – pooling visions and surging ahead

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Summary: Novel cross-sectorial and transdisciplinary work on climate impacts has led to a shared, local knowledge and visions' platform for adaptation and planning. A regional center for coastal water sector related research and innovation on climate change adaptation is becoming reality: the 'Climatorium'.

Abstract

Adaptation planning in the town of Thyborøn, Denmark, has over the past three years evolved from a transdisciplinary research and work approach involving the Lemvig Municipality, Lemvig Water and Wastewater Company (LWW), national government agencies, the Port of Thyborøn, universities, private consultants on a "want in" basis, as well as interested citizens. The starting point was to yield a more holistic approach to the elaborate impacts of climate change and to share knowledge and data in an "integrated impact system" for future planning and development. A low-lying and highly vulnerable coastal community even today, Thyborøn faces increasing flood challenges from rise in sea and groundwater levels, more extreme storm surge levels and changed precipitation patterns. In addition, the town experiences land subsidence in residential and industrial landfill areas on former fjord bottom. Through the transdisciplinary work meetings and workshops the participants have continuously strived to reach common grounds with a focus on mutual as well as individual gains and benefits, for instance in relation to business development. The paper presents the work in Thyborøn with a bias towards the usefulness of results and of the collaborative forum to the LWW, where employees at all levels partake and contribute to advancing the business and taking shared visions to the next level: the EU Life co-funded Central Denmark Region partnership project "Coast to Coast Climate Challenge" (c2ccc.eu) yields options to further develop the impact integration system for early warnings and dynamic updates to account for climate change variables at different time scales. In addition, the potential use of flexible/alternative pipe systems in areas of differential land subsidence is investigated in order to extend the life expectancy of the water and wastewater systems. Furthermore, from the co-creation of knowledge within the partnership project and industry networks, universities etc.; LWW, Lemvig Municipality, and Aarhus University are main actors in the establishment of a 'Climatorium' in the town of Lemvig. The Climatorium will function as a regional center of excellence for research and innovation on sustainable, water related solutions in coastal communities, and it will showcase and communicate best practices in climate change adaptation.