A closer look at the climate resilience and sustainability performance of the vision for De Staart, Dordrecht

In IABR–Atelier Dordrecht, the IABR, the city of Dordrecht and Rijkswaterstaat examine ways to use flood resilience as a leverage for a new and widely supported sustainable urban development (policy) plan. They have studied the possibilities to turn De Staart into a safe haven in case of a flood threat, as well as a location in which a truly sustainable urban development is realized in the best possible manner. To what extent does the plan help to achieve this? Esmée te Velde, who did her student internship for the Interreg NSR project C5a, has assessed the climate resilience and sustainability performance of the plan for De Staart.

The assessment of the urban development plan was conducted in a qualitative way, with the use of the Sustainable Development Goals (SDG). This policy framework is recently tailored into the SDG-Sustainability Impact Score (SDG-SIS) framework by Schippers et al. (2021).[i] Their framework systematically considers the SDGs and their 169 targets to support the assessment of sustainability performance, and thereby enhance climate resilient and adaptable development. It starts with the consideration of the coastal system features, including ecosystem functionalities.

Based on the system functionalities for a (delta) port city, Esmée has identified 85 targets to be included in the SDG-SIS framework. She reduced this to 56 targets, by excluding targets for Small Island Developing States and Least Developed Countries. These 56 targets were considered with the aim to check the potential correlation of the functionalities contributing to those SDGs. This assessment revealed that the vision of the urban development plan for De Staart contributes to 49 out of the 56 targets. This level of contribution is a significant improvement compared with the prevailing vision (that is, the so-called Structuurvisie Dordrecht 2040), which contributes to only 40 targets. This implies that the measures that are included in the new vision will more likely lead to a climate resilient and adaptable development.

In the urban development plan for De Staart, there is no link to 5 targets: SDG 6.4 (increase water efficiency), SDG 10.1 (achieve and sustain income growth of the bottom 40%) , SDG 12.4 (environmentally sound management of chemicals and all wastes), SDG 12.6 (encourage sustainable practices for companies), SDG 14.1 (reduce marine pollution). Out of these 5 targets, 4 targets can be directly linked to the heavy industries located on De Staart. The heavy industries are not addressed in the vision for De Staart, also due to the fact that city of Dordrecht is not the licensor for heavy industries. Nevertheless, the industries affect the living conditions of the people of Dordrecht and nearby towns.

The application of the SDG-SIS framework has provided relevant insights to the city of Dordrecht that would not have emerged from more commonly used methods (e.g. multi criteria assessment). Behind each SDG target lies a set of development / improvement measures. Based on the insights obtained, the city can now put more emphasis and planning capacity into those SDG targets that have not yet been addressed by the new vision. This could mean expanding the proposed set of development /

improvement measures for De Staart. In this way (that is, by providing insights into underexposed SDG targets) the SDG-SIS framework application has significant added value for a municipality, like the city of Dordrecht. On a more general level, an insight that emerged from this assessment is that a large number of SDG targets are relevant for cities: 85 targets for delta (port) cities compared to 38 targets for coastal systems (refer to Schippers et al., 2021). This implies that strategic decision making is needed in such a context to ensure that the different targets are well-balanced / integrated in the plan.

The application to the case study of Dordrecht demonstrates the utility of the SDG-SIS framework for the assessment of the C5a plans with selected SDG targets, as a qualitative analysis or (rather) as analysis with numeric data. This presents an opportunity to replicate the assessment for other C5a case studies, with the accessible databases for detailed analyses. Using the system functionalities, the relevant SDGs for the C5A case studies can be identified in the SDG-SIS framework. This allows each case study to make the comparison of their plan or project to some baseline, with the use the selected SDGs, in order to link it to the EU Strategy on adaptation to climate change. Lastly, there is the opportunity to integrate the application of SDG-SIS module in (the toolbox of) the Cloud-to-Coast approach.

[i] Schipper, C.A.; Dekker, G.G.J.; de Visser, B.; Bolman, B.; Lodder, Q. Characterization of SDGs towards Coastal Management: Sustainability Performance and Cross-Linking Consequences. Sustainability 2021, 13, 1560. https://doi.org/10.3390/su13031560