

IPDD – Results

The project Integrated Planning and Design in the Delta (IPDD) aimed to develop an approach for planning and design in urbanized delta regions. These regions are characterized by an extreme complexity because of the combination of a dynamic natural environment with dynamic social and economic developments. The many processes and interests in an urbanized delta region are very different from each other concerning land-use claims and concerning the speed of changes. It is difficult to predict these changes at the long term; however it is important to anticipate on possible changes like sea level rise, economic growth or shrinkage.

The IPDD project aimed to develop an approach which leads to the urbanized delta as a Complex Adaptive System (CAS). The different parts (or subsystems) of this system should be investigated, as well as their mutual influence on each other. Possible effects of changes in one subsystem to the other ones are mapped and presented to actors with an interactive 'Delta Envisioning Support System'. This creates the possibility for actors to get insight in the possibilities to adapt the whole region to future changes (adapt), to discover common interests of different actors (synchronize) and to develop strategies and make appointments on common actions and interventions (mobilize).

This approach will lead to a new practice of (a) design and planning, (b) governance and (c) methods to work with scientific (geo-) data. It is important to build a new relationship among these practices, resulting in a better use of scientific data by planners and designers, in order to be able to answer wishes and interests of actors in a proper way. This approach concerns a number of steps:

1. Historic perspective: research by mapping the different processes in the delta region in the past; how these processes have influenced each other and have resulted in critical transitions in certain periods. This research leads to knowledge of the 'behaviour' of the delta region as a complex system.
2. Future perspective: The line of the historic analysis will be continued to the future, by using different scenarios concerning possible climate changes and possible economic and demographic changes. These different scenarios result in different possible maps of the future delta region.
3. Actor analysis. Based upon a series of interviews, the different interests and perspectives of actors are analysed.
4. Plan analysis. Recent plan, visions and sketches for (parts of) the region are analysed and judged concerning their capacity to adapt, synchronize and mobilize.
5. DENVIS: Delta Envisioning Support System. The information of the previous four steps will be elaborated in a series of digital maps, which can be presented on digital maptables. This material serves as a basis for a 'serious game' with involved actors, who can adapt the maps in an interactive way and who can develop a common vision, which combines short-term and small-scale initiatives with creating conditions for long-term and large-scale possible developments. The result is the plan figure of a 'robust adaptive framework'. This framework is robust in the sense that it guarantees safety against flooding at the long term; it is adaptive in the sense that land-use, the flood defense construction and space for new nature can be adapted in the course of time.

The methodical approach as well as the plan figure of the Robust Adaptive Framework are also relevant for other urbanized delta regions. A first exploration in this sense focused on the Mississippi River delta, the Mekong delta and the Elbe estuary. Our conclusion is that the IPDD approach can contribute to a stronger adaptivity and sustainability of these cases.

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