

THE SAND MOTOR: A NATURE-BASED RESPONSE TO CLIMATE CHANGE

FINDINGS AND REFLECTIONS OF THE INTERDISCIPLINARY
RESEARCH PROGRAM NATURECOAST

EDITED BY
Arjen Luijendijk
Alexander van Oudenhoven



Arjen Luijendijk (right) was active in the NatureCoast program as a postdoctoral researcher at Delft University of Technology from the start in 2013 until the end in 2018. He focused on setting up the interaction between the PhD researchers and end-users, as well as integrating the research findings. He worked on developing integrated model forecasts and developed the world's first global beach erosion map. He is currently working as a Specialist at Deltares and as a researcher at the Delft University of Technology on predicting the future behavior of the world's beaches.

Alexander van Oudenhoven (left) was active in the NatureCoast program as postdoctoral researcher at Leiden University between 2015 and 2018. He focused on integrating the program's scientific findings, thereby looking at the potential benefits that nature-inclusive coastal management can generate and how these are perceived. He is currently working as an assistant professor at the Institute of Environmental Sciences at Leiden University, working on the interface between biodiversity, ecosystem services and societies' quality of life. In the spring of 2018, he became Co-Editor in Chief of Ecosystems and People, an interdisciplinary open access scientific journal.

THE SAND MOTOR: A NATURE-BASED RESPONSE TO CLIMATE CHANGE

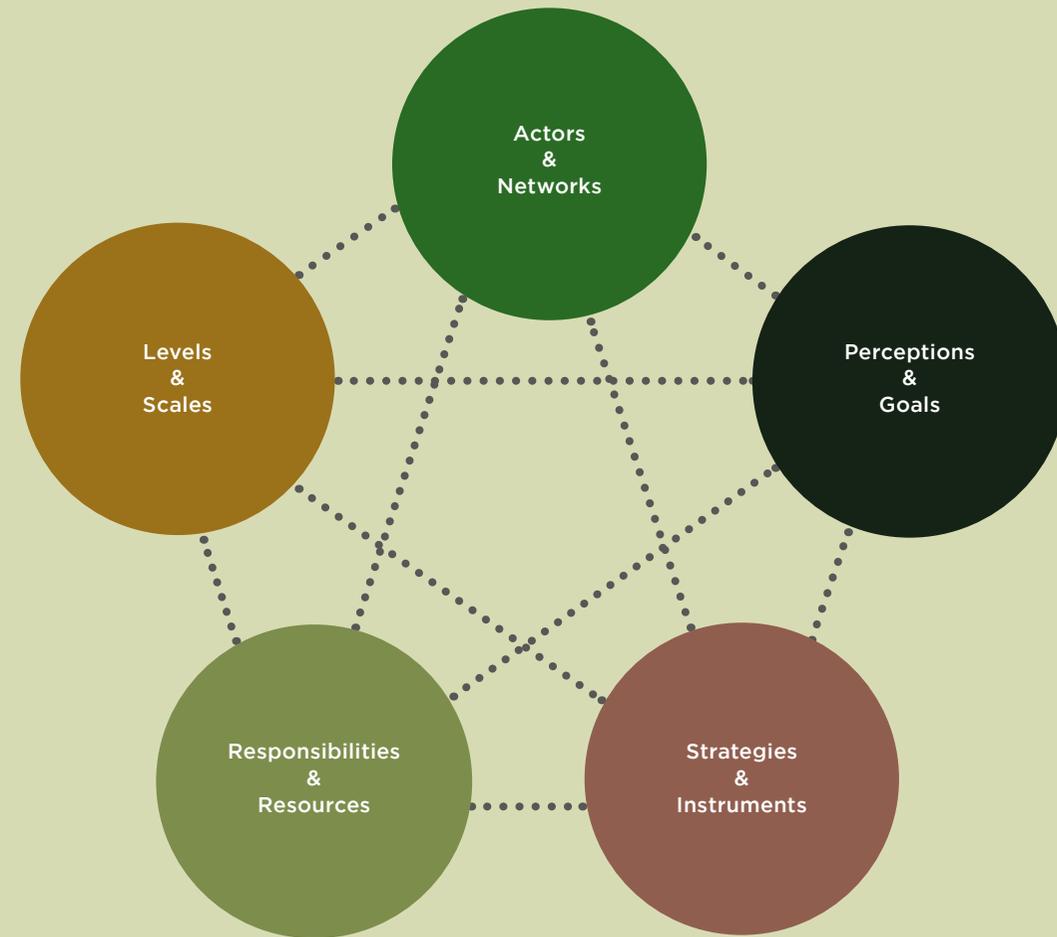
FINDINGS AND REFLECTIONS OF THE INTERDISCIPLINARY
RESEARCH PROGRAM NATURECOAST

Edited by

Arjen Luijendijk
Alexander van Oudenhoven



Figure 1.
Five interrelated dimensions of governance.
(Source figure: Hans Bressers and Nanny Bressers (Eds.) (2015), *Governance Assessment Guide*, Almelo: Vechtstromen Water Authority.)



Hans Bressers

MULTIFUNCTIONALITY AS A SUPPORTING FRAME AND STORYLINE

REFLECTION

Hans Bressers is a professor of Policy Studies and Environmental Policy at the University of Twente. Within NatureCoast, he was the Principal Investigator for scientific research project S6, which focused on the governance aspects of the pilot Sand Motor.

This chapter deals with how the Sand Motor came about. This intriguing question led researchers Ewert Aukes and Lotte Bontje on a quest that provided many insights into the dynamics of the decision-making process leading up to the pilot Sand Motor. The researchers approached the issue from different, but related starting points: the frames that guided stakeholders to interpret the actual case (Page 30), and the storylines which stakeholders used to understand the whole project (Page 34).

Of course, there are other ways to approach governance questions. The term “governance” was first used in policy studies in the terms “multi-level governance” and “multi-actor governance.” Multi-level governance means that a given issue is not dealt with at a single level, for instance national or municipal, but at multiple levels simultaneously (e.g., national *and* municipal). It rarely makes sense to look for the “best” level to arrange things. Instead, it is more useful to make sure that the various levels involved are well aligned. In the case of the Sand Motor that was not just true for the decision-making levels. The Sand Motor itself is a great example of a very local measure explicitly intended to serve much of the Dutch coastline.

Multi-actor governance means that a given issue is not just a concern for one actor, the “decision maker.” It involves the interplay of many actors, both governmental and non-governmental, and often includes stakeholders within sectors. In multi-actor governance, the sector is not just the object of decisions, but actively involved in steering –and sometimes opposing– them. The Sand Motor was clearly a case of such interplay of actors.

Analyzing governance means identifying multiple goals and ways to achieve these. Goals can depend on different perceptions of what core issues are at stake – and they are often compromises. As a result, these goals are sometimes contradictory. Thinking in terms of governance rather than “policy” or “administration” also means that we need to recognize the variety of strategies and instruments proposed to achieve those goals, and the different responsibilities necessary to implement them. Few water projects would be

feasible in the Netherlands without pooling resources, both financial and administrative. As illustrated in Figure 1, the key elements of governance are interdependent, interrelated and make governance and decision making a complex process.

Studies of the NatureCoast project approached governance from the point of view of “perceptions.” A key result is the importance of “multifunctionality” as both a supportive storyline and a frame for the project. Multifunctionality refers to the multiple goals that were included in the Sand Motor pilot, but studies also show how multifunctionality made it possible to integrate various scales, actors, potential strategies, responsibilities, and resources. In other words, the emphasis on perceptions has not limited the studies, but has provided a starting point for considering all the “rooms of the governance house.”

Considering the usefulness of concepts like frames and storylines, one cannot help but view the basic idea of “Building with Nature” as a powerful storyline and frame itself. While the name might change over time, the basic idea remains the same –aligning with nature rather than fighting it– and this has proven to be a compelling one that has opened many stakeholders’ minds towards new and innovative options. The realm of its use has been rather quickly and vastly expanding.

The European Union already adopted the Building with Nature idea in the mid-2000s, promoting it as “working with nature.” The World Association for Waterborne Transport Infrastructure also embraced the term in 2011. More recently, the United Nations placed this philosophy at the core of its report *Nature-based Solutions for Water* (2018), connecting it to other “framing buzzwords,” such as circular economy, green growth, sustainable development goals and resilience.

On World Water Day 2018, the concept of Building with Nature was strongly supported in a position paper by the Dutch special envoy for international water affairs, Henk Ovink, and the director of EcoShape, Henk Nieboer (see Pages 3 and 187). Finally, the concept is also attracting attention for applications further inland, linked to climate adaptation measures. One can conclude by saying that Building with Nature is not just a frame for nature-based solutions, but an extremely successful one with a bright future.