involved placing 21.5 million m³ of sand on and in front of the beach North Sea coast near The Hague. This unprecedented pilot project, Sand Motor, a large sandy peninsula, constructed in 2011 on the Dutch coast, formed to conduct interdisciplinary research on the Sand Motor. The Sand Motor has triggered considerable political and scientific interest from all over the world. Broad research consortia were involved, which includes many of the world’s leading researchers in marine, terrestrial, and coastal sciences. NatureCoast was an integral part of this. Because of its innovations, “learning by doing” has been a crucial part of the project and has led to significant advances in understanding how, ultimately, societies can benefit from it.

The book presents countless facets of the Sand Motor, but we also hope it demonstrates the scientific merits of interdisciplinary research and presents an integrative platform for understanding how the interface between biodiversity, ecosystem services, and societies’ quality of life can be managed. In the spring of 2018, he became Co-Editor in Chief of Ecosystems and People, and 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 inclusive coastal management. He focused on integrating the program’s scientific findings, thereby looking at the potential benefits that nature-based management can generate and how they are perceived. He is currently working as an inclusive coastal management can generate and how they are perceived. He is currently working as an inclusive coastal management can generate and how they are perceived. He is currently working as an inclusive coastal management can generate and how they are perceived.
The overall consensus is that the Sand Motor has been a success. Although it is still too early to indicate the long-term consequences of this kind of large-scale beach nourishment, the success stories told about the Sand Motor tend to mute the critical ones (Page 34). So, how did the Sand Motor come to be perceived as “successful”? And does the Sand Motor’s proclaimed success serve as a promise for future large-scale projects using sand? As we shall see, “framing” can provide a valuable lens to understand how this general consensus developed, and why critical stories have had a hard time surviving in the political debate as well as in society.

Generally speaking, the Sand Motor can be characterized as a “smooth” project. Few disagreements among actors were so persistent as to significantly delay the project or even threaten its realization. This meant that the Sand Motor was quickly implemented (from the first ideas in 2006 to its construction in 2011) and helped to define it as a success. The province of South Holland led the Sand Motor project, which is unusual, since provincial governments are not formally responsible for coastal management in the Netherlands. However, a growing population and its demand for space presented a pressing spatial planning issue for the province. Consequently, the Sand Motor concept of a large, multi-purpose sand body went down well with the province.

Unfortunately, the Sand Motor is by no means a blueprint for future large-scale coastal engineering projects. A case in point is the coastal reinforcement project carried out at the Hondsbossche and Pettemer Sea Defense (Hondsbossche and Pettemer, Figure 1), which took more than ten years to be implemented with disagreements and personnel changes (first idea was raised in 2004, but construction only occurred in 2015). In this project on the North Sea coast of North Holland, a proposed seawall reinforcement eventually turned into a large beach nourishment scheme. The evolution of the proposed solution coincided with changes in which organization was in charge of leading the project. To understand the role of framing, the transition period from one proposed solution to the next is especially telling.

Comparing the smooth Sand Motor project and the rocky HPZ project helps us to understand how framing affects successful realization of large-scale projects using sand.

Let us first introduce the concept of framing. This concept assumes that interpretations of what happens differ from person to person and may depend on education, experience, or even the organizations people belong to. Applied to policymaking, framing theory states that actors interpret how desirable a policy and propose solutions based on their “frame.” For example, one policy maker might recommend lowering taxes to encourage consumer spending, while another might argue for increasing wages because they are viewing the problem from different perspectives. We will consider two aspects of framing here: the content of the frames and the actors’ framing capabilities.

Content of the frames
Framing content refers to the ideas actors have about a policy situation. In coastal management, this could mean whether they advocate a traditional “hard” engineering solution or an innovative “soft” one. (Figure 2, next page). If the goal of policy making is that an actor is able to successfully implement their proposal, being able to vary framing content is an advantage. Doing so allows an actor to adapt to the political and social context in which they operate, and to present their proposal in a way that is more likely to be accepted.

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Ewert Aukes
UNDERSTANDING PROJECT SUCCESS THROUGH FRAMING CONTENT AND CAPABILITY

Figure 7. Locations of Sand Motor and Hondsbossche and Pettemer Sea Defense
structures. (Photo credit: Boskalis.)

in 2006, the province of North Holland proposed reinforcing the existing HPZ with an expensive traditional seawall, which would later have meant “sacrificing” half a village. This proposal ignored regional, economic, and demographic developments – both pressing matters in the region – and it did not create new recreational spaces. With its strong focus on coastal safety, the proposal disregarded different framing content. For actors with other frames, the proposal would make the situation even worse. In other words, framing the solution in terms of a traditional, monofunctional seawall reinforcement was too limited, and was unable to adapt to other framing contents. Omitting these other framing contents created a rift between the provincial government and other actors. The resulting political impasse was only overcome as another organization gradually took over as project lead, and as a more versatile, large-scale sand nourishment scheme was chosen to reinforce the coast of North Holland.

How different was the Sand Motor project? From the start, the province of South Holland, which led the project, advocated for a project which would protect the coast, enable leisure activities, and encourage economic development at the beach, which would not only spark national and global interest for an unprecedented Dutch coastal innovation (Multifunctionality frame, Figure 3). Such an integrated vision had the potential to get many actors on board, even if their framing content represented only a part of those elements. While some aspects, such as the precise location and shape of the Sand Motor, were thoroughly examined, its integrated design eventually facilitated a broad coalition in its favor. In the end, the Sand Motor was not only realized because of the versatility of its framing content (Figure 3), but also due to the framing capabilities applied in the project.

The Sand Motor project not only shows that a versatile framing content helps an actor to convince others, but that these options have been deployed skillfully to achieve an effect. It may be more difficult, especially in less experimental projects like the HPZ project, where pre-existing coastal safety criteria might determine the response. In such cases, it requires a creative and daring project lead to move beyond pre-defined framing content and find innovative coastal management solutions that might be more suitable.

The Sand Motor and HPZ projects developed at a time, when large-scale projects using sand resulted in the dominance of hard structures. (Photo credit: Boskalis.)

The Sand Motor project was not only realized because of the versatility of its framing content, but also due to the framing capabilities applied in the project.

This actor’s framing capabilities facilitated the use of the selective components of framing, where an actor chooses to communicate with whom they choose to communicate. This strategic use of framing capabilities also allowed them to broaden or narrow the range of functions depending on whom they were trying to convince. Once the province found a way of framing the Sand Motor’s functions that resonated with another organization’s framing content, the added value would appear, and the other actors would come convinced of the project’s usefulness. The ability to find the right tone and arguments resulted in a growing coalition of organizations supporting the Sand Motor through its construction in 2011.

It takes a creative, daring leader. The Sand Motor project required an actor to think creatively and adaptively to resonate with other actors’ framing content, but also due to the other framing contents created a rift between the provincial government and other actors. The resulting political impasse was only overcome as another organization gradually took over as project lead, and as a more versatile, large-scale sand nourishment scheme was chosen to reinforce the coast of North Holland.

The versatility of the Sand Motor provided many new framing options – and the provincial government of South Holland seized these. It began by involving many actors in the process and trying to understand their interests. A broad advisory board was established for the project, including a high-profile chairman and all municipal delegates; this board provided information and permitted consultation. With a thorough understanding of the framing content of other actors, the provincial government began a kind of “promotion tour” to advocate for the project’s proposal, much like a traveling salesman promoting a product at various doorsteps (Figure 4). It visited multiple political organizations – such as a national innovation platform and Rijkswaterstaat – and presented the project’s inclusive forum for spatial planning projects. The presentation of a broad and inclusive platform of these organizations as a result of the versatility of the framing content allowed them to broaden the scope of the discussion and most of the actors were trying to convince. Once the province found a way of framing the Sand Motor’s functions that resonated with another organization’s framing content, the added value would appear, and the other actors would become convinced of the project’s usefulness. The ability to find the right tone and arguments resulted in a growing coalition of organizations supporting the Sand Motor through its construction in 2011.

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The Sand Motor and HPZ projects developed at a time, when large-scale projects using sand resulted in the dominance of hard structures. (Photo credit: Boskalis.)