

DESIGNING FOR STAKEHOLDER VALUES IN PORT DEVELOPMENT IN AFRICA

by

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ABSTRACT

This paper addresses the need for stakeholder-inclusive design in sustainable port development. This involves learning about the values and knowledge resources of local stakeholders at an early stage, but is a step that is often omitted in current port planning processes. However, it is essential in creating added value and in avoiding costly delays when port development is stopped or delayed by social impact findings at a later stage. A stakeholder engagement process for the Port of Tema, Ghana, is used to illustrate the types of activities required and offer insights in the outcomes. In particular, a game structuring method applied in a 50-people workshop in February 2017 demonstrated that the expertise of local stakeholders and insight into their preferences regarding potential futures for the port city and its surroundings can inform planners, port authorities and engineering scientists about what it means to be a sustainable port in a developing country context.

1. INTRODUCTION

Sustainable development recognizes that growth must be both socially inclusive and environmentally sound to meet the needs of present and future generations. While seaports provide an essential link to the world market, enabling countries to trade their goods and strengthen their economy, these global and regional benefits do not always translate into benefits to local stakeholders. Indeed, there is often a mismatch between the positive global and regional effects of port development and the impacts (dis-benefits) that can be experienced locally (Rodrigue, Comtois and Slack, 2017; Merk, 2013). Port development requires a paradigm shift from a traditional approach to a stakeholder-inclusive, integrated approach to be sustainable (Vellinga et al., 2017; Schipper et al., 2017).

The Ghanaian Port of Tema forms the focus point for an ongoing project “Integrated and Sustainable Port Development in Ghana in an African Context” (NWO 2018). The research project is carried out by a consortium comprising the University of Ghana, and Dutch knowledge institutes and private sector companies. While the broad research aims are to gain insights in how to develop integrated and sustainable African ports that meet economic, social and environmental demands, one of the specific objectives is to find out what local stakeholders value as a sustainable port, in that it (i) creates value for stakeholders working and living in the immediate environment of the port, (ii) can still meet demands in 50 years, and (iii) can grow apace with economic developments of the future. The purpose of this paper is to provide tangible examples of the range of stakeholder-inclusive, value-based interactions implemented in the port city of Tema.

2. THE STAKEHOLDER ENGAGEMENT PROCESS

Recognising that stakeholder-engagement is a prerequisite for sustainability, four activities were initiated. The first activity involved organising a stakeholder workshop prior to the inception of the project. This occurred in Tema in 2015, and the outcomes were used to refine the focus of the research project and ensure that it addressed issues raised by the workshop participants. The

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participants included local, regional and national authorities, industry, port developers, tourism and nature interest groups, amongst others. Participants first played the serious game Port of the Future. This is an interactive game in which players assume the roles of various stakeholders and decide on measures to be implemented during the process of port development. Each round in the game involves a negotiation within and between the different roles. The envisaged learning relates to the potential sustainability of measures and the importance of negotiating agreements on measures. The game served as a communication tool to bring across the significance and implications of sustainable port development for stakeholders, and helped to deepen understanding of different and often conflicting interests while attempting to create a port that not only serves economic functions but is in harmony with the surrounding ecosystems. Following the game, participants were encouraged to elaborate and discuss the issues they considered of relevance for Tema. The outcomes were an increased awareness of sustainable port development, and concurrence amongst the participants on the economic, ecological and social aspects that the project should address. These outcomes were included in the “Integrated and Sustainable Port Development in Ghana in an African Context” project proposal (NWO 2018).

Next, a workshop for project partners and supporting parties (see Vellinga (2017) for information about the project organization) was held in Delft, the Netherlands, in September 2016 with similar objectives (Vreugdenhil, 2016). The Ghanaian researchers participated in the workshop through an active skype link. The workshop agenda incorporated an introductory presentation on the project, which included the input from the first workshop, a question and answer session, a personal mini-survey over what is (or is not) a sustainable port in Tema or an ideal world. This was then followed by group sessions on sustainable ports and general discussion. Then, the serious game Port of the Future was played as part of the workshop. This was done for parity with the stakeholder workshop in Ghana. Finally participants were asked to reflect on workshop. The outcomes were similar to the first workshop in Tema, namely increased awareness of sustainability and consensus on the most important issues to address via the project. In addition, the connectedness of the network around the project was strengthened, and the inputs and insights from the Ghanaian partners added depth to the discussion on sustainability within an African context.

Following an intensive six-month period of data accumulation and research, a multi-stakeholder workshop was organized at the Ghana Ports and Harbours Authority Headquarters (GPHA Tower) in Tema in February 2017. This crucial activity in the overarching research project was designed to engage local port-related stakeholders in an innovative, value-based exploration of the future of Tema and its port. Clearly, the selection of participants and the method employed to engage with stakeholders are critical to success here. Invitations to stakeholders were issued on the basis of their involvement with the port. So, participants were drawn from different layers within the GPHA, and ranged from freight forwarders, local businesses involved with the port, port developers, to interest group representatives for tourism and the coastal ecosystem, as well as local scientists. More than 50 people attended the workshop, participating thoughtfully and enthusiastically in the different steps in the process. A six step game-structuring methodology (see Box 1) underpinned the workshop (Cunningham et al. 2014; Slinger et al. 2014).

The multi-stakeholder workshop was grounded in a wider stakeholder-inclusive situation assessment. Because the multi-stakeholder workshop was oriented to port-related stakeholders, an additional process of interviewing local residents with no direct relationship to the port was initiated in February 2017. This process was continued in 2018, resulting in more than 25 interviews shedding light on the effects of port development on those who live in, or near, Tema. These include traditional leaders, the original inhabitants of Tema prior to Port construction, local fishermen, teachers, immigrants to the area, long-time residents, town-planners and many more. The effects on these stakeholders are both positive and negative and vary in their impact on the lives of the people concerned. The envisaged output of this process is a deep understanding of the long term consequences of port expansion in all its facets, captured in a book that is currently under preparation.

Game structuring is a transdisciplinary practice developed specifically for environments in which multiple stakeholders, holding diverse values, are involved in the long term management of a social-environmental system, such as Tema and its Port. The purpose is thus not to reach consensus nor to solve conflicts, but rather to explore the existing different interests, values, potential and preferred futures, as well as the potential clusters of actions belonging to these futures and the associated restrictions, objections and hurdles. The workshop method rests on operations research traditions, using game theory in combination with techniques such as systems modeling and community narrative generation in particular. This potentially offers the participants in such a long term social-environmental negotiation a wider view on their own and others' positions, both now and in the future. The aspiration is that this leads to commitments to joint action based on shared values on the part of participants.

Workshops based on the game structuring approach have been conducted in South Africa (Slinger et al., 2014), the Houston Galveston Bay Area (Cunningham et al. 2015), and the island of Texel in the Netherlands. In all these cases, the method was experienced positively by participants and has been associated with increased stakeholder engagement in local decision making processes in the subsequent months

The game structuring, value-based design method as applied in Tema, Ghana entailed six steps:

1. Getting acquainted
2. Developing the system story; local stakeholders on past, present and future of Tema and its Port
3. Developing the system story; researchers on Sustainable Ports in Africa, Tema and its Port
4. Identifying key stakeholders
5. Developing visions
6. Voting on visions from the point of view of key stakeholders.

Documentation on the workshop process and outcomes was subsequently supplied to all participants.

Box 1: Game structuring method for stakeholder engagement workshops

3. OUTCOMES OF STAKEHOLDER ENGAGEMENT

The four activities comprising the stakeholder engagement process of the “Integrated and Sustainable Port Development in Ghana in an African Context” project to date have yielded:

- a composite story of the evolution of Tema from before the first port was constructed, to the present day and beyond;
- positive and negative visions for the future of the port and city of Tema;
- insights on the values held by local stakeholders in relation to these visions of the future;
- understanding of effects of the port development on the lives of local stakeholders.

4. CONCLUDING

The composite understanding of stakeholder values and port effects has enabled the subsequent identification of ecological, economic, infrastructural and social components that could potentially be used in the sustainable development of Tema and its port. In summary, grounded stakeholder engagement methods have proved vital in accessing local knowledge on how to improve the fit between the port of Tema and its social-ecological environment. We anticipate that local stakeholder inclusion and value-based design will prove equally important, and form a generic process-element, in a framework for sustainable development of ports in other localities in Ghana, Africa, and worldwide.

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