Evaluating Participatory Planning Tools

An internship report about the role of Participatory Planning Tools in decision making within Strategic Delta Management

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Project: "Strengthening strategic delta planning processes in Bangladesh, the Netherlands, Vietnam and beyond"

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Deltares

Enabling Delta Life

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Abstract

An assessment framework to evaluate Participatory Planning Tools is being formulated to assess the role of these tools in decision making. The framework was created to evaluate three tools: DENVIS, Design Charettes and Participatory Scenario Development. A literature review, interviews with the tool developers and discussions with experts were conducted to achieve this. The report starts with a description of the conceptual framework. The framework consists of different phases and it assesses the role of participatory planning tools over time when it is applied, especially focussing on the participatory aspects of the tools. The first phase, the Input phase, addresses the objectives of the tool according to the tool developers. Other phases discuss the role of the applied tool, the results after application of the tool and long-term impacts or effects of the tool. The framework focusses within these phases on six dimensions: Facilitating Communication, Sharing Knowledge, Social Learning, Power Differences, Integration and Level of Agreement. The information of how the tools scored on those dimensions is gathered by questionnaires with open ended questions and statements that can be rated on a 1-10 scale. The framework has been applied in a workshop in Ho Chi Minh City, Vietnam and the results from that workshop are presented. Several conclusions are drawn from these results and insights for the tool developers are mentioned. The main insight for the tool developers was that the framework helps to think why the participatory aspect of the tools is important. Recommendations on what should be taken into account when taking the next step in assessing tools within the project of strategic delta planning are given at the end of the report. The report will finish with key-conclusions that are main aspects to take into account when assessing tools through an assessment framework.

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1. Introduction

An increasing world population over the last century has resulted in land use change on a large scale over the planet. Everywhere in the world huge changes are apparent in forests, agricultural land and waterways to provide food, water and shelter for over 6 billion people (Foley et al., 2005). This is also the case in most delta-areas all over the world. Large dynamics in land-use like urbanisation, agriculture and industrialisation has as a consequence that most deltas in the world are dealing with an increasing complexity (Meyer and Nijhuis, 2011). Another reason for this increase in complexity in deltas is that climate change and human interventions cause changes in the natural dynamics in the delta. With an increasing complexity in deltas, the Strategic Delta Planning Project[1], in which Deltares is a project partner, aims for a long-term integrated and adaptive management of urbanising deltas. This project is about the role of stakeholders, experts and policy makers in delta planning and wants to secure successful implementation by looking at a long-term planning horizon.

A part of this project focusses on participatory planning tools and approaches (from now on called PPT's). These are defined as *"tools and approaches that enable a variety of actors to participate in the planning process"* (Seijger et al., 2016). These tools could have the potential to facilitate discussions between actors and possibly contribute to consent realisation among actors to ensure long term delta development. This report is about the formulation of an assessment framework to assess the role of PPT's in decision making. With such an evaluation, the framework reflects on the application of such tools/approaches. As a result, there is aspiration to contribute to improved participatory planning tools to reach stable stakeholder agreements. The main question what this research will answer is: **"How can Participatory Planning Tools be assessed through an assessment framework?"** The framework is developed to assess three PPT's, so the framework has a general focus and this focus is mostly on the participatory aspects of the three Participatory Planning Tools. These three tools are DENVIS, Design Charettes and Participatory Scenario Development.

In chapter 2, I will provide an overview of the steps I have taken during my internship to create and improve the assessment framework. Chapter 3 will be about the conceptual framework that acts as the base of the assessment framework and will also provide an explanation of the different Participatory Planning Tools, their application and their differences. Chapter 4 will discuss the results per step and chapter 5 will be about the discussion of these results. A big part of this report is the results of the application of the framework in a workshop in October 2016 in Ho Chi Minh City, Vietnam. This workshop was called 'Participatory Planning Tools for Strategic Delta Planning and Management' and a large part of chapter 5 will be about the discussion of the results of this workshop. Also in chapter 5, recommendations are given on what should be taken into account when taking the next step in assessing tools within the project of strategic delta planning. The report will finish with key-conclusions per step that are main aspects to take into account when assessing tools through an assessment framework.

Footnote 1: project website: http://www.nwo.nl/en/research-and-results/research-projects/i/71/10971.html

2. Process Steps

In this chapter I will explain the steps I have taken over the course of 5 months that eventually led to a complete assessment framework. All the steps I have taken in this period to improve the assessment framework are also mentioned in table 1. In the step of "testing the assessment framework" the setting of a workshop where the assessment framework was applied in Vietnam in mid-October 2016 will be described as this was a big step during my internship.

2.1 Creating the assessment framework

The first step I took was interviewing Shahnoor Hasan, she is a PhD candidate for research on PPT's. She gave me an introduction to what PPT's actually are and how they are applied to real-life situations. She also provided me with literature about PPT's to look into and potentially use for the framework. After this meeting I did a literature research on PPT's and tried to identify roles that tools can have within a decision-making process. I made a list of all these roles and try to cluster them under several main dimensions for in the assessment framework. In the meantime I had several interviews with the Tool Developers of the three tools that were going to be assessed through the framework. I asked them about the application of the PPT's and whether the tools have ever been assessed before. Also I asked them about the goals they want to achieve with their PPT's and if there are dimensions which they want their tool to be evaluated on. From these interviews several goals became apparent and I added them to the list of dimensions that I obtained from the literature.

In the beginning of September I had a meeting with Sadie McEvoy and Chris Seijger to discuss how I could start formulating the assessment framework. Sadie is also a PhD candidate who wrote her proposal on "Participatory analytic activities in planning climate resilient cities". She explained that she wants to assess the participatory aspect of analytic activities and that she used a framework of Thissen and Twaalfhoven (2001) to act as a base for her research. She mentioned that it could also be suitable to act as a base for the framework and after I read the article in which the authors discuss the framework, I agreed and so I used this framework as a base.

At the end of September, Chris Seijger, Shahnoor Hasan, Jaap Evers from UNESCO-IHE and I came together to discuss the dimensions I wanted to use for the assessment framework. During a discussion, we merged them together into six overarching dimensions on which the PPT's will be assessed through the framework. To evaluate the dimensions I proposed to conduct questionnaires and posing questions per dimension. In the discussion, we talked about what aspects were included under each dimension and which questions I could pose per dimension. For example for the dimension facilitating communication, we discussed different streams of communication between the participants and the tool developer during the application of the tool. This eventually led to a drawing in which these streams are displayed, to make it more clear for the participant what is meant when there is a question posed about these different streams of communication. A few weeks after this meeting I had another meeting with Sadie about different ways of posing questions. For example with the dimension of Sharing Knowledge, you can ask the participants if they think they have learned something, in which they will most likely say that they did as this is a new situation for them. However if you would pose a certain question in the pre-questionnaire and ask the same question in the post-questionnaire, you can actually see if people have learned. Additionally I had a meeting with Laura Basco Carrera from Deltares about the dimensions and about

the way of posing questions to get more opinions of people about the framework. She is making a framework for (almost) all PPT's that are on the market and tries to identify which tool can be used best in what situation.

2.2 Testing the assessment framework

On December 29th and 30th I took part in an event called "Delta Talent Academy". In this event, I and approximately 30 other students were divided into groups and were asked to solve a case study about a polluted river in Manila. Chris Seijger and I thought this would be a good opportunity to test the assessment framework during the working in groups. I adjusted the provisional questionnaires to meet the characteristics of the workshop and handed them out before and after the event. The conclusion was that the questionnaires were clear and not too long. There were, however, some questions with words that were not entirely clear what they meant. Consequently I used more words in the questionnaire to describe these words to make it clearer. Two weeks after this event, I went to Vietnam with Deltares to apply the framework to the 'Participatory Planning Tools for Strategic Delta Planning and Management' workshop. In the following subchapter I will explain more about the setting in this workshop. After applying the framework, there were no direct changes made. I also had a meeting with Maaike van Aalst to test the questionnaires prior to the application in Vietnam. Several changes were made regarding the language used in the questionnaires.

2.2.1 Setting of the Vietnam workshop

This subchapter will be about the setting of a workshop in Vietnam in mid-October 2016 where the assessment framework was applied. The results of this application will be mentioned in chapter 4 and discussed in chapter 5.

The workshop was held in Ho Chi Minh City, Vietnam where the three tools were applied to the scale of the Mekong delta and on a more local scale: on the province of Tra Vinh. There was an excursion to this province (see Figure 2) and while being there, the area was being observed as highly cultivated with almost no forest. The most prominent issue in this area is salinization of the soil and groundwater by intruding salt water. The government has placed several sluices to prevent this, but social clashes between farmers and the government were inevitable. This is due to the fact that the transition of some farmers to shrimp farming had already happened and more freshwater in the river due to the sluices lowered the production of salt tolerant crops or shrimp. During the two days after the excursion, the three tools were applied to both scale-levels and we used the information gained from this field trip.
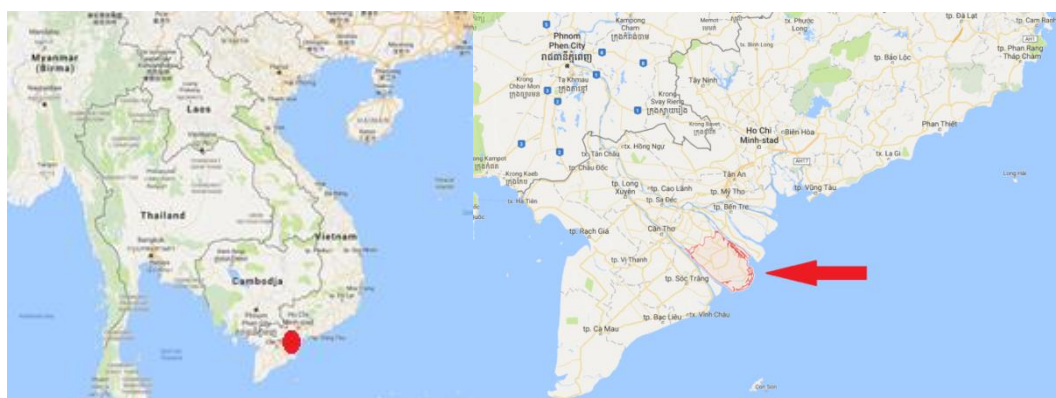

Figure 1 Location of Tra Vinh (Source: Google Maps).

The setting in the 'Participatory Planning Tools for Strategic Delta Planning and Management' workshop in Ho Chi Minh City served a training purpose whereas tools have normally been applied to address real-world problems of participants representing various organisations and interests. In this workshop, people from Bangladesh, Myanmar, Indonesia, Vietnam and The Netherlands came together to work with the three PPT's on a case study in the Mekong Delta to get familiar with the tools and to see if they could use the tools in a situation in their home country. This changes the interests of the participants and the tool developers and requires a different view if it comes down to making questions for a questionnaire. The questionnaires in this workshop are for example more about the additional value of participation of the planning tools compared to questionnaires after a workshop about "real life" situations with actual stakeholders.

In this workshop the PPT's were applied in a mix and not one tool after the other. This made the two days of applying three different tools look like it was one big tool. This consequently led to a questionnaire for the participants about one tool that overarches all three at the beginning and the end of the workshop.

2.3 Reflecting upon the assessment framework

The results of the application were discussed in a meeting between Chris Seijger, Jaap Evers, Maaike van Aalst, Like Bijlsma (PBL), Jantsje van Loon (WUR), Sadie McEvoy and I. In this meeting several recommendations have been made, for example: The Excel file needed a sheet in which the scores of the participants can be filled in and not only the averages. Also the questions in the questionnaires need to be posed in a more neutral way so that there is no bias in the results. Additionally in all the questionnaires, questions about the context should be posed to get more insight in what kind of environment the PPT is applied.

Interview with	When	Topic of interview
1. Shahnoor Hasan (UNESCO-IHE)	Mid-August (Start of internship)	Introduction to Participatory Planning Tools and relevant literature.
2. Maike Warmerdam (Bosch & Slabbers)	End of August	The goals & application of Design Charettes and dimensions where Charettes should be evaluated on.
3. Leo Pols (PBL)	Beginning of September	The goals & application of DENVIS and dimensions where DENVIS should be evaluated on.
4. Maaike van Aalst (Deltares)	Beginning of September	The goals & application of Part. Scen. Dev. and dimensions where Part. Scen. Dev. should be evaluated on.

Meeting with	When	Topic of meeting
5. Sadie McEvoy (Deltares)	Beginning of September	How to assess PPT's
6. Chris Seijger, Shahnoor Hasan & Jaap Evers (UNESCO-IHE)	End of September	Merging all dimensions into 6 overarching dimensions and the corresponding questions of those dimensions for in the questionnaires.
7. Sadie McEvoy	Mid-September	The way of posing questions in questionnaires to get the best answers.
8. Laura Basco Carrera (Deltares)	End of September	Also about the way of posing questions and about the dimensions in the framework.
9. Maaike van Aalst	End of September	Testing of the questionnaires.
Workshop	**When**	**What changed in the framework**
10. Delta Talent Academy	29 & 30 September	Questions in the questionnaires have been made more understandable.
11. Strategic Delta Planning Workshop	16 October – 22 October	The application of the framework did not lead to any direct changes.
Meeting with	**When**	**What changed in the framework**
12. Chris Seijger, Jaap Evers, Maaike van Aalst, Like Bijlsma (PBL), Jantsje van Loon (WUR), Sadie McEvoy	19 December	Several recommendations have been made, for example: The Excel file needed improvement, look into neutral way of posing questions and ask questions about the context in the questionnaires.

Table 1 The steps I took over the course of 5 months to create and improve the assessment framework.

3. Method

3.1 Conceptual framework

In this chapter I will explain the conceptual framework I used as a base for my assessment framework. I will first discuss the literature about the conceptual framework, followed by a description of the different phases of the assessment framework.

3.1.1 The base of the assessment framework

In an article by Thissen and Twaalfhoven (2001) a conceptual framework is presented to evaluate policy analytic activities. A policy analytic activity is described in this article as an analytic effort towards a specific policy issue. These activities often have a project character to provide a specific product and or support. The purpose can be for example to provide information about a specific policy issue. Also it can be used "*to analyse or structure messy policy problem situations*" (Thissen & Walker, 2012). That framework to analyse these activities is as follows:
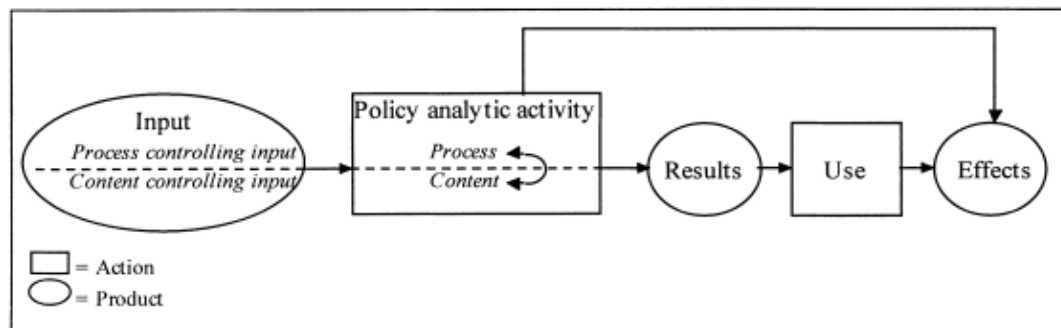

Figure 2 A conceptual framework to analyse policy analytic activities (Thissen & Twaalfhoven, 2001).

In the framework above, a distinction is made between content and process. There is input that is being used by the policy analytic activity that leads to certain products or results. Those results can be used to witness the effects in a later stage of the process. Policy analytic activities can also have a direct effect without having produced any result.

For evaluating participatory planning tools this framework could act as a base and in this research I regard a Participatory Planning Tool as a policy analytic activity. The fact that this framework has four phases which are input, the analytic activity itself, the results and the effects made it fit to the phases I wanted to assess with the framework: the goal of the tool developer, the participatory planning tool itself, the outcomes of the application of the tool and the impacts it would have on the long term. Moreover, for the to-be-created assessment framework I wanted a simple basic structure that provides a clear overview of how I was going to assess the role of Participatory Planning Tools. The structure of this framework is very basic, without a lot of feedbacks or loops and therefore I felt like this framework was suited to act as a base for the framework. However, because there are not that many feedbacks taken up in this framework, there could be certain parts of the framework directly affecting other parts without it being displayed in the framework. Also because the framework is basic, there could be certain external factors affecting parts of the framework but those can also not be observed in the framework. There are a lot of factors determining and affecting the roles of tools in decision making and consequently there could be factors that are not

evaluated through the assessment framework, which is the downside of a basic framework. This should be taken into account in discussions about the assessment framework and the roles of tools.

With the assessment framework, the main thing I will evaluate is the participatory aspects of the three Participatory Planning Tools. The non-participatory goals of the tools will also be evaluated but the focus with my framework will be on the participatory aspect. The dimensions in the framework will for example only focus on the participatory aspect of the tools.

An article by Hassenforder et al. (2015) discusses a framework on the comparison of participatory processes (COPP). This framework makes a division into three themes: context, process attributes and outputs, outcomes and impacts. When looking at relevant literature on Participatory Planning Tools, aspects like involvement of stakeholders, transparency of information, quality of communication and collaboration between stakeholders are important aspects of these tools (Goosen, et al., 2007; Report on DENVIS workshop by S. Hasan; Hasan, S. et al. (to be published)) and these aspects all focus on the process of the tool. The tool developers mentioned in personal interviews that integrated cooperation is an important dimension, which they want their tool to be evaluated on. Hence, this will also be a dimension in the framework.

In the same aforementioned articles, results of the Participatory Planning Tools are also mentioned. This seems an important aspect as well, so I will incorporate this in the assessment framework. As a result, with my framework the following aspects will be evaluated: the process controlling input, the process of the Participatory Planning Tool and more content focussed: the results and the effects that it has on the long term. This covers two themes of the COPP framework. The last theme in the COPP framework, the context theme, is also an important theme as *"a specific participatory process method can lead to different outcomes due to differences in contextual circumstances"* and is taken up in the recommendation section of this report to be added to the framework in a later stage.

Another framework which I considered to be the base of my assessment framework is the framework of Van Asselt & Rijkens-Klomp (2002) but this framework was not suited to evaluate PPT's in this case. This framework is about a typology of goals of participation with two axes in the framework: one with as polar opposites "Reaching Consensus" and "Mapping out Diversity" (targeted output) and the other axes: "Process as a goal" and "Process as a Means" (motivation). This framework puts different forms of participation onto the axes and like this, provides an overview of the motivation and targeted output of that participation. This was, however, not suited to act as a base for my framework because there were more roles of tools that I wanted to evaluate than the 4 polar opposites that are present in this framework. Moreover, a division between phases was needed in my framework because to have a complete image of the role that tools have in decision making, an evaluation needs to be made over time and this was lacking in this framework.

3.2.2 Phases of the framework
The framework consists of four separate phases, as displayed in Figure 2. The first phase is the "Input" which is the goal of the PPT as intended by the tool developer. In this phase also the type of participation as described by Wesselink et al. (2011) about the rationales of participation is observed. Additionally in this phase, the reason to involve stakeholders in the planning process and in what stage of the planning process the PPT is applied is observed. For example in this phase rateable statements are posed about what the tool should do, which the tool developers can rate according to what they want to achieve with their tool. In the second phase, the role of the PPT is

evaluated looking at six dimensions. What these dimensions are will be explained in the following subchapter. In this phase rateable statements are posed about what is expected of the tool, but also open questions about what is the motivation of people to participate. After the tool has been applied, statements and questions are posed about the role during the application of the tool and if the different interests of the participants were taken up in the outcomes. The third phase is the "Result" phase which is about the direct outcomes, like for example the increase of social support for decisions or the identification of short term actions for different groups of people. This phase will be evaluated after 1-2 months after the application of the tool. The fourth phase is about effects and the impact and influence of the PPT on the long term (6 months-3 years after application of the tool). These are either focussed on the process attributes, for example empowered individuals and the implication of a long term view in planning policy cycles, but can also be more focussed on the content, for example the generation of spinoff.
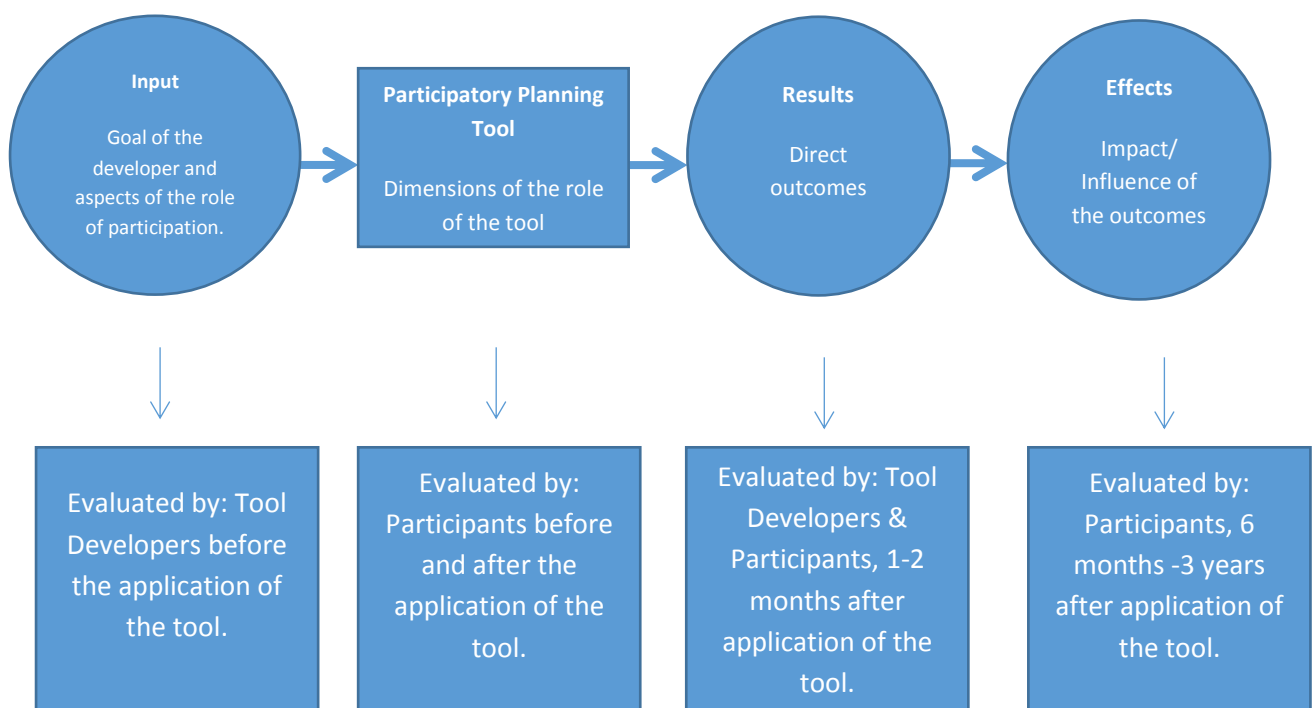

Figure 3 The assessment framework consists of four separate phases and will each be evaluated on a different moment in time and by different people.

3.2 Dimensions of the assessment framework

From a literature review, interviews with the tool developers and some long discussions between Chris Seijger, several other experts and I, six dimensions have been identified on which the tools are evaluated. These dimensions are mentioned and explained below. The literature used to determine these dimensions is mentioned after each dimension. For a complete list of the literature that is used for the formulation of the conceptual framework and the dimensions, please take a look at the references at the end of the report.

1. Facilitating Communication: the exchange of ideas and thoughts with other participants and the responding of participants to each other. It is about different streams of communication and the tool offering support towards dialogues, exchanging of ideas and

reaching common grounds. It is also about information that is passed on through the instrument of the tool (like for example MapTable or other design-tools) because through visualisation of spatial and future situations, it helps participants to articulate their visions and interests. (Literature used for this dimension: Proposal PhD S. Hasan; Werkboek Atelier Kustkwaliteit 2013; Goosen et al., 2007; Report on DENVIS Workshop (By S. Hasan); Pelzer et al., 2013; Patel et al., 2007; Hasan et al., to be published)

2. Sharing Knowledge: Tools support a platform for sharing information and knowledge and can create awareness among participants of the situation and problems at stake. This can help to get more insight and understanding in the interests of other participants and can also influence the decision making of the participants. (Literature used for this dimension: Proposal PhD S. Hasan; Volk et al., 2009; Werkboek Atelier Kustkwaliteit 2013; Goosen et al., 2007; Report on DENVIS Workshop (By S. Hasan); Abelson & Gauvin, 2006; Hasan et al., to be published)
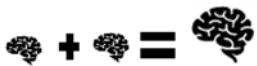
3. Social Learning: the perception of participants about other participants, interests of other participants, problems in the area and strategies for the area. Tools can be used to help reveal deeper meanings and values and help frame or reframe perceptions to ultimately result in social learning. Through having discussions around preferences of each participant, it is expected that reasons behind different motivations become apparent. To acknowledge that social learning has taken place, three process criteria can be identified: it must be demonstrated that a change in understanding has taken place in the individuals that are involved in the process; demonstrate that this change gets situated within wider social units; and occur through social interactions and processes between actors within a social network. (Literature used for this dimension: Proposal PhD S. Hasan; Volk et al., 2009; van Asselt & Rijkens-Klomp, 2002; Goosen et al., 2007; Pelzer et al., 2013; Abelson & Gauvin, 2006; Patel et al., 2007; Hasan et al., to be published; Reed et al., 2010)

4. Power Differences: the rules of how to participate are clear and participants are not withholding any views or opinions during the workshop. Power play is one of the factors that can influence the use, role and associated outcomes of a tool; therefore it should be taken into account when tools are assessed. Tools also give a voice to stakeholders and provide transparency of information. This dimension also looks at how discussions during the use of the tool can contribute to the outcomes of the training course. (Literature used for this dimension: Proposal PhD S. Hasan; Volk et al., 2009; van Asselt & Rijkens-Klomp, 2002; Werkboek Atelier Kustkwaliteit 2013; Goosen et al., 2007; Report on DENVIS Workshop (By S. Hasan); Hasan et al., to be published)

5. Integration: integration between sectors has been stimulated during the workshop. Also about the tool providing insights in side-effects of policy options and trade-offs that will have to be made. Tools can facilitate stakeholder engagement and enhance participation and through this, the tool can contribute to a more integrated approach and understanding on problems and strategies in the area. (Literature used for this dimension: Proposal PhD S. Hasan; Volk et al., 2009; Goosen et al., 2007; Report on DENVIS Workshop (By S. Hasan); Patel et al., 2007; Hasan et al., to be published)

6. Level of Agreement: agreement among participants on the main problems and strategies for the area. Tools can be used to identify and resolve conflicts and create consent. This consent can for example be on to-be-implemented strategies or projects. By taking account of the expressed values of each stakeholder, it is expected that the level of conflict can be reduced. This dimension is also about the creation of joint gains between participants. (Literature used for this dimension: Proposal PhD S. Hasan; van Asselt & Rijkens-Klomp, 2002; Goosen et al., 2007; Report on DENVIS Workshop (By S. Hasan); Patel et al., 2007; Hasan et al., to be published)

3.3 How to evaluate

The six dimensions of the framework are evaluated through questionnaires, which can be observed in the Annex of this report. The first phase of the framework, the Input, is determined through a questionnaire with the tool developers. The following step is to let the PPT be evaluated by the participants through questionnaires. There is a pre-questionnaire, prior to the application of the tool and a post-questionnaire, immediately after the tool has been applied. All three questionnaires contain statements about the dimensions that can be rated from 1 till 10 and the questionnaires for the participants additionally contain open questions. The "Results" and "Effect" phase of the framework will be evaluated in a later stage by the participants. By letting the tool developers and the participants rate the statements/questions in the questionnaires on a scale, the difference between the goals (from the tool developers) the expectation (from the pre-questionnaire) and the evaluation (from the post-questionnaire) will become clear and these can be easily compared. For example for the dimension of Power Differences, statements are posed in the questionnaire for the tool developers about whether the tool takes the limitation of power differences into account as a goal. In the pre-questionnaire there are be statements about the participant's expectation about speaking freely about problems and strategies for the area. In the post-questionnaire there are be statements about whether the tools actually supported a level playing field and whether the rules on how to participate were clear. In the result-questionnaire a statement is posed about whether the playing field among stakeholders was more levelled than before the application of the tool. And finally in the effects-questionnaire there is a statement about the levelling of the playing field between organisations that were involved and represented during application of the tool or organisations that are affected by problems or strategies in the area.

After the evaluation by the participants, I created an Excel file in the form of a Multi-Criteria Analysis (MCA). In this file you can fill in the different tools and rate them for each dimension. Like this, the different scores per dimension can become clear in a short amount of time, as the only thing that needs to be done is to enter the average scores per dimension. This helps for data storing purposes as all questions and scores are stored together in one file. Additionally, you can also fill in a weight per dimension. If a tool is being applied and for that session for example integration is a very important aspect that needs to be achieved, a higher weight can be added to that dimension so that the overall score of the tool is also higher. Also, if the decision is made that the tools need to be evaluated on an additional dimension that was not there in the framework, it can easily be added to the Excel file. Like this, the new dimension is immediately taken up in the total score of the tool.

3.4 Result- and effect-questionnaires

In the evaluation for the tool developers there were several more goals to be achieved that were not evaluated yet in the Pre- and Post-questionnaire. These goals would normally be evaluated through

the Result-questionnaire 1-2 months after the workshop and through the Effect-questionnaire 6 months-3 years after the workshop. However, because the setting of this workshop was different than a real life setting, the results in the questionnaire will be less prominent. There were no clear results as, for example, clear implementation strategies, social support for decisions or strategies or developed clear short term actions what people can do now, to achieve a certain goal in the future. For this reason the Result- and the Effect-questionnaires will not be handed out to the participants. I have however created these two questionnaires to demonstrate what they would look like and to have a complete assessment framework for the next time the framework will be applied.

For the results and effects of the training course I checked literature for any possible outcomes that tools can have. Additionally I asked in the interviews with the tool developers at the start of my internship, what outcomes they want to be achieved through the application of their tool. From these two sources of information I formulated the Results-questionnaire to be handed out to both, the participants and the tool developers around more or less 2 months after the application of the tool. Below, I will mention several outcomes and the literature I used to determine those. Additionally, statements will be posed that the participants and tool developers can score about the six dimensions of the framework. For the complete Results-questionnaire, please check the annex.

- Measures that have been tested for their robustness (van Asselt & Rijkens-Klomp, 2002; Hasan et al., to be published) (robust meaning: measures that are effective over all possible scenarios)
- Plans and projects that have been tested for their sustainability when taking the long term (can be from 10 to 100 years, depending on the setting and goal of the workshop) into account (Werkboek Atelier Kustkwaliteit 2013)
- Scenarios for the long term (van Asselt & Rijkens-Klomp, 2002; Hasan et al., to be published)
- Explored alternative solutions (van Asselt & Rijkens-Klomp, 2002; Goosen et al., 2007; Report on DENVIS Workshop (By S. Hasan))
- A developed clear implementation strategy (Report on DENVIS Workshop (By S. Hasan))
- Social support for decisions/strategies (van Asselt & Rijkens-Klomp, 2002)
- Improved trust and confidence in the possible planning outcomes (strategies/plans/projects) (Volk et al., 2009)
- Clear short term actions for stakeholders based on a long term view (Interviews)
- The initiation of a project (Interviews)

The following effects are impacts or influences on the long term and they will be evaluated by the participants only, between 6 months and 3 years after use of the tool. The literature (and interviews) that is used for these impacts and influences is mentioned and for a complete list of the literature used, please check the references for the list: "Literature used for formulation of conceptual framework". The participants will be asked through a questionnaire whether any of the below-mentioned effects are applicable to their situation. Just like with the other questionnaires, there will also be statements that the participants can score about the six dimensions of the framework. For the Effects-questionnaire, please check the annex.

- Coalitions(s) with long term collaboration among participants of planning processes (Proposal PhD S. Hasan; Werkboek Atelier Kustkwaliteit 2013)
- Developed spatial plans (Report on DENVIS Workshop (By S. Hasan))

- Improved possible planning outcomes (strategies/plans/projects) (Hasan et al., to be published)
- Improved quality of decisions (Report on DENVIS Workshop (By S. Hasan))
- Improved capacity for future public involvement (Abelson & Gauvin, 2006)
- A long term view is embedded in the planning culture and planning policy of stakeholders (Interviews)
- Follow-up innovations (can be pilots, experiments, projects, etc.) (Interviews)
- Empowered individuals as a consequence of participation (Nikkhah & Redzuan, 2009)

3.5 The three Participatory Planning Tools

This subchapter provides a description of the three PPT's which are evaluated through the assessment framework.

DENVIS: DENVIS stands for Delta Envisioning Support System, which is developed by PBL. It is a serious design game that tries to deal with spatial planning challenges. This tool uses different kinds of techniques within a workshop. These can be concepts like a design studio (like Charettes, which is explained below) or working with participatory scenarios. The difference between Charettes, Participatory Scenario Development and DENVIS is that DENVIS uses both these two tools but also has other aspects such as for example a stakeholder analyses or mobilising, which is the creating of governance arrangements. The tool works with maps in order to provide knowledge to help stakeholders understand each other's interest and make them develop new design solutions (Leo Pols (P.I.), PBL). One of these maps is for example MapTable. Maptable is a map-based touch table which works with the "*Sustainability Profile of the Location*" (Pelzer et al., 2013). It does that by working with two layers: a land-use layer and a layer with additional sustainable functions as for example windmills. On this map you can draw or sketch visions or ideas that you may have for the study area.

DENVIS has been applied in The Netherlands in the Haringvliet, a water basin in the south of the Netherlands. Here, the tool helped to develop a shared vision and agreement among the stakeholders (Meyer et al., 2015). Each time DENVIS is used, it is adjusted to the specific situation and so it takes a lot of time preparing a DENVIS workshop.

Design Charettes: "*A Charette is a creative, enthousiasm-arousing design meeting of stakeholders*" (Slabbers et al.). The meeting consists of around 20-25 people from different backgrounds that create an integrated design for a certain area. This could for example be an area where new buildings or business are to be build or an area that deals with (water) issues and could be redesigned. The idea is that the participants have very little time to finish a very complex problem, which means that there is pressure to collaborate and come up with a design. The results of the Charettes are integrated and sustainable concepts and ideas that should be interpreted as substantiated designs that have the possibility to be used in a later stage in the design process. Charettes have been used for example after hurricane Katrina in New Orleans, in Ho Chi Minh City in 2013 near the delta of the Mekong and in New York after hurricane Sandy. Design Charettes are being applied a lot by designers/landscape architects. Within this project, the focus is on the Design Charettes of Bosch en Slabbers, which are project partners.

Participatory Scenario Development: "*Scenario planning is a systemic method for thinking creatively about possible complex and uncertain futures*" (Peterson et al., 2003). This can also be applied in a participatory manner in a setting with multiple stakeholders. These are brought together to reach a common view on possible futures for the study area (Patel et al., 2007). It enables a qualitative elaboration on the development of scenarios, as focussing on quantitative information can make the participants feel a false sense of certainty and objectivity. Deltares is working on Participatory Scenario Development within the project of strategic delta planning. All three tools have been used in settings in where stakeholders with different and similar interests made use of the PPT and had a discussion on how to improve their situation by finding solutions or strategies.

4. Results

In this chapter the results of the different phases will be mentioned. The first part will be about insights from different interviews and meetings I have had. The second part will be about the results of the application of the framework and the final part will be the results from the reflection meeting.

4.1 Create assessment framework

Interview about Design Charettes with Maike Warmerdam:

There is one general concept of Design Charettes but when it is applied it can last from 1 day till even 4-5 days depending on the assignment. A Design Charette can be applied to initiate the decision-making process but also it can be used as a pressure cooker where it is applied as a quick way to come up with ideas to solve a specific problem.

The goals of Charettes are:

- To understand and inspire each other
- Develop a shared vision with all stakeholders
- Education and transfer of knowledge
- Kick-starting a project/lifting the project to a higher level

Interview about DENVIS with Leo Pols:

When DENVIS is applied, there is a certain framework that is used but the tool is adjusted to the situation where it is applied. Maps of the study area are put into the MapTable and like this adjusted to the specific situation. DENVIS has a lot of aspects with scenarios and charettes as a part of it. What is a part of DENVIS outside the scenarios and the charettes is for example the creation of governance arrangements. When DENVIS is applied there is a so-called "soft space" which a virtual space where people can think openly and come up with ideas. Outside DENVIS there is no more "soft space" and there is the real world with all its formal restrictions. An additional part of DENVIS is to find a trigger to actually implement the ideas that have been generated during the application of DENVIS.

The goals of DENVIS are:

- Facilitate/fasten the planning process
- Solving conflicts and making conflicts debatable
- Finding synergies and making these debatable

Interview about Participatory Scenario Development with Maaike van Aalst:

Participatory Scenario Development is applied in different ways according to the goal that wants to be achieved. It can for example be to stress-test your measures over different scenarios to see whether they are robust (robust meaning: measures that are effective over all possible scenarios). It also can be used to create scenarios for the long term. In the sessions of Part. Scen. Dev. a lot of different stakeholders are involved like for example experts, NGO's, companies, ministries and international organisations of different sectors. The most important part of Part. Scen. Dev. is to

connect the short term with the long term through the use of scenarios. A division is made between Scenario Development and Participatory Scenario Development:

The general goals of Participatory Scenario Development are:

- Robustness testing of measures
- Creating a strategic vision for the future

The goals of the Participatory element in Participatory Scenario Development are:

- Creating social support
- Capacity building (education and learning)
- Imbedding of long term view into planning culture and planning policy
- Creating awareness of the situation that people are in and the choices that they can make in this
- Changing the short term actions into clear short term actions that take the long term into account
- Integrality: cooperation between different sectors
- Changing the actions on the short term into clear short term actions based on a long term view

Meetings with Sadie McEvoy:

- The Thissen and Twaalfhoven framework can act as a base for the assessment framework.
- Find out more about the goal of participation and pose this in a question to the tool developers; the rationales of participation were added to the evaluation for the tool developers.
- How to pose questions in questionnaires. There are multiple ways: open questions, rateable statements or for example to find out whether participants have learned something from the workshop, you can pose a certain question in the pre-questionnaire and ask the same question in the post-questionnaire. By comparing the answers that people have given to that same question, you can actually see if people have learned.

Meeting with Chris Seijger, Shahnoor Hasan and Jaap Evers:

- Clustered the different dimensions and aspects of dimensions I found in the literature and interviews with tool developers into six overarching dimensions.
- The dimension of facilitating communication in the framework will include different streams of communication.
- For the rateable questions a scale from 1-10 is going to be used because some people never give a full score as they perceive there is always room for improvement. If people never give a full score, this has a smaller influence on a larger scale than on a smaller scale.

Meeting with Laura Basco Carrera:

- Additional information on how to pose questions in questionnaires.

Meeting with Maaike van Aalst:

- The questionnaires were specified to the situation in Vietnam
- More questions about the type of participation and when in the planning process the tool was applied, were added to the evaluation for the tool developers.

4.2 Test assessment framework

Insights from application of framework to Delta Talent Academy:

- Several words in questions in the questionnaires were unclear. For example some participants did not know what was meant with the words "key outcomes". In deliberation with Chris Seijger, I changed this to "the main problems and strategies for the area".
- In the questionnaire some questions per dimension were posed as a question and some were posed as a statement. People advised me to have one similar way of posing questions instead of a question for one dimension and a statement for another. Their argument for this was that it would make the questions clearer and easier to answer.

Insights from application of framework to workshop in Vietnam:

In this section I will provide the results from the application of the framework in Vietnam. First I will provide the results from the evaluation of the tool developers, then the results from the pre-questionnaire and lastly the results of the post-questionnaire. The results will all be displayed in a table at the end of this section.

Figure 4 Several participants of the workshop in Vietnam are developing a vision for the future for the Mekong Delta.

Results from the evaluation of the tool developers:

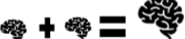The tool developers scored for each dimension on average (evaluated by 3 tool developers):

Dimension	Goal
	8
	7,7
	8
	8,3
	9
	7

Table 2 The score per dimension in the evaluation for the tool developers.

Results from the pre-questionnaire:

Participants had several different motivations to join the workshop. Among those, the following motivations were most frequently mentioned:

- To learn about strategic delta planning, participatory planning tools and how to apply these tools.
- To pass this knowledge on to colleagues or students and to add some of the topics to a course so that students can use this approach/tool (teaching purposes).
- Increase their network.
- Increase knowledge about situations/strategies regarding water management in other countries than their home country.

Of a total of 26 participants, 25 people brought scientific knowledge, 7 brought bureaucratic knowledge and 11 brought stakeholder knowledge.

14 people know 0-25% of the participants, 10 people know 25-50% of the participants, 1 person knows 50-75% of the participants and 1 person knows 75-100% of the participants.

The participants scored for each dimension on average (evaluated by 26 participants):

Dimension	Expected
	7,5
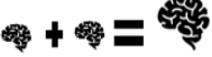
	7,3
	7,4
	7,6
	7,1
	6,6

Table 3 The score per dimension in the pre-questionnaire.
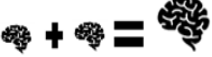
Results from the post-questionnaire:

The training course in general was rated on average with a 7.8

In the post-questionnaire also a question was posed about whether the participants thought their interests were taken into account in the final outcomes of the training course. Several responses were:

- I have learned about PPT's and about strategic delta planning so my interests have been taken into account.
- Delta planning is a collective effort so the engagement of stakeholders will be taken up into the outcome.
- My interest was also in the failure and success of the application of PPT's in other countries and this was lacking.
- It was a positive open environment where my ideas were respected and considered.

The participants scored for each dimension on average (evaluated by 28 participants):

Dimension	Result
	7,9
	8,1
	7
	7,7

	7,1
	7,3

Table 4 The score per dimension in the post-questionnaire.

All results combined in one table:

In Table 5 there are the average scores per dimension that have been rated by the tool developers (the column "Goal (1)") and the average scores per dimension that have been rated by the participants (the column "Expected (2)" from the pre-questionnaire and the column "Result (3)" from the post-questionnaire). In the two columns next to these, the goal of the tool developer is compared to the results from the post-questionnaire (1)-(3) and the expectation from the participants (pre-questionnaire) is compared to the results from the post-questionnaire (2)-(3). If, for example, there is a negative score displayed in red in the column "Goal - Result", this means that the goal was rated higher by the tool developer of that dimension than the participants rated that dimension in the post-questionnaire. If, for example, there is a positive score displayed in green in the column "Expected - Result", this means that the participants rated that dimension higher in the post-questionnaire compared to the expectation. These results are an average of 3 questionnaires from the tool developers, 28 pre-questionnaires and 26 post-questionnaires.

To see the specific questions that have been asked in the questionnaires during the workshop, please take a look at the questionnaires in the annex.
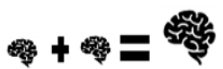
Dimension	Goal (1)	Expected (2)	Result (3)		(1) – (3)	(2) - (3)
	8	7,5	7,9		-0,1	0,4
	7,7	7,3	8,1		0,4	0,8
	8	7,4	7		-1	-0,4
	8,3	7,6	7,7		-0,6	0,1
	9	7,1	7,1		-1,9	0,0
	7	6,6	7,3		0,3	0,7

Table 5 Average score per dimension from the questionnaires in the workshop.

4.3 Reflect upon assessment framework

On December 19th Chris Seijger, Jantsje van Loon (my supervisor at Wageningen UR), Maaike van Aalst and other tool developers and experts and I had a final discussion about the assessment framework, the results of its application in Vietnam and about the way of assessing tools through an assessment framework. Several conclusions were drawn from this discussion. I will mention both, the insights for assessing PPT's and the insights of the tool developers here and add a section to the chapter "Discussion" about several themes that were discussed during this meeting.

Insights for assessing PPT's are:

- Overall the score of the tools is good; tools do better, or are in line, with the expectations of the participants.
- More distinction between the participants needs to be made, so that conclusions can be drawn from this (for example on nationality or on background).
- The context of the application of the tool is important when assessing tools. Several examples of how this can be done are given in the recommendation section of chapter 5.
- A more neutral way of posing questions is required. Also here, several examples of how this can be done are given in the recommendation section of chapter 5.

Additional to these conclusions, the assessment framework I created provided several insights for the tool developers. Those are mentioned here:

- The main insight of the tool developers was that it helps to think why the participatory aspect of the tools is important. This framework with its dimensions makes that explicit. It gives insight in how well your participatory process was organised.
- There is more to tools than just the features of the tool where it was designed for. There are extra dimensions or goals which do not seem so obvious at first (like the different dimensions in the assessment framework) but can be important. It helps to be more reflective about the goals that tools can have. A session like the meeting on December 19th also helps with that.
- It also helps to structure the goals of the tool developers with their tool and to distinguish between different goals that are important.
- There are some interesting patterns in the results of the application of the framework in Vietnam and this provides new insights in what are important features of participation, but the results are not meaningful without knowing the context of what was assessed.
- Additionally the assessment framework can help to design new sessions as it makes key dimensions of participation explicit.

5. Discussion & Recommendations

In this chapter I will discuss the difference in scores per dimension that have been rated by the tool developers and the participants. Firstly I will mention several conclusions that can be drawn from Table 5. Subsequently, I will discuss the meaning of the difference in scores per dimension between the goal that was set by the tool developers (evaluation for tool developers) and the score that was given by the participants after the workshop had taken place (post-questionnaire). Additionally, I will discuss the meaning of the difference in scores per dimension between the expectation of the participants (pre-questionnaire) and the results after the workshop had taken place (post-questionnaire). At the end of this chapter I will provide some recommendations on what should be taken into account when taking the next step in assessing tools within the project of strategic delta planning.

5.1 Discussion about the application of the framework in Vietnam

There are four general conclusions that can be drawn from the results in Table 5:

- The overall score for every dimension is very high. All dimensions score higher than an average 7 in all questionnaires, except for the expectation on the level of agreement in the pre -questionnaire that scored a 6.6.
- The results of the post-questionnaire are not always in line with the goals of the tool developers. Some are better than expected, like for example knowledge sharing and level of agreement but others score lower, like integration, power difference and social learning.
- Integration seems to be important as a goal but does not seem to be achieved (difference of almost 2). Also social learning scores 1 point lower than the goal was. The other differences are all below 1 point.
- Power Differences scored more or less as high as what the participants expected but the score of the goal of tool developers regarding this dimension is not achieved in the post-questionnaire.
- The participants met their own expectations; the scores in the post-questionnaire were almost all just as high or higher than in the pre-questionnaire.

In the following subchapter, these conclusions will be discussed more elaborately.

5.1.1 Goals compared with results

When comparing the goals of the developer regarding the score they gave to the dimensions with the scores that the participants gave to these dimensions at the end of the workshop, the tools score lower on four dimensions. Scores lower than 1 point are minor deviations and could be considered as the goal being achieved. There are, however, two dimensions on which the tools score 1 point or more lower than the goal, the dimensions of Social Learning and Integration. These two dimensions seem to be important as goals but are seemingly hard to achieve in the workshop. When looking at these dimensions in the questionnaires, the following statements were asked to be rated regarding social learning:

In the evaluation for the tool developers:

1. The tool should contribute to a better understanding of shared interests, values and perceptions towards the problems and strategies. Average: 8

In the Post-questionnaire (combined average of 7):

1. Your perception of other participants has changed. Average: 7
2. Your perception of the interest of other participants has changed. Average: 6.8
3. Your perception of problems in Tra Vinh has changed. Average: 7.1
4. Your perception of strategies has changed for Tra Vinh (for example more focussed on the long term). Average: 7.1

The difference of 1 point between the average score by the tool developers and the average score by the participants in the post-questionnaire could be attributed to a large difference in average between the four statements in the post-questionnaire. If one statement for example would score very low, this would lower the combined average score. However, as can be seen in the average scores above, there are no large differences visible and all scores are more or less a 7.

When comparing the statements on social learning of both the questionnaire for the tool developers and the statements on social learning for the participants in the post-questionnaire, it could be that the workshop of a week was too short to have a big impact on the perceptions of people towards other people, other people's interests or the problems in and strategies for Tra Vinh. People's perceptions maybe do not change that fast and it could take way more effort to actually change perceptions of people.

The cause of the deviations in scores on social learning could also be that in this workshop setting there is less rivalry between the participants than in a "normal" setting with real stakeholders and when there is actually something at stake. It could be that in a real life setting, the perceptions of people towards other people or other people's interests change more dramatically than in the setting of this workshop.

Integration scored almost 2 points lower than the goal. The following statements were posed:

In the evaluation for the tool developers:

1. The tool should stimulate integration between participants from different sectors (for instance agriculture and industry). Average: 9

In the Post-questionnaire (combined average of 7.1):

1. The training course has made you aware of trade-offs, or balances on goals that cannot be reached at the same time, between different sectors (e.g. fishery, agriculture, industry, housing). Average: 7.2
2. Integration between different sectors was clearly stimulated during the training course. Average: 7

Again, there is not much difference between the two statements of the post-questionnaire, so the large difference between the scores cannot be attributed to one statement that scored very low.

When comparing all three statements, it seems like the tools did not stimulate integration enough and did not make the participants aware enough of trade-offs or goals that cannot be reached at the same time as the goal that was set (a 9) was not achieved (a 7.1). However, the expectation of the participants (7.1) was met. A reason for the lower score of integration in the Post-questionnaire

could be that, when I participated in the workshop, I did not get a feeling that different sectors were being represented by different people. There were people present with different backgrounds and from different sectors but I did not get the impression that they actually represented that sector for their interests. It could be interesting to observe, if the framework is applied in a real-life situation where people represent different sectors, if the dimension of integration scores higher in the post-questionnaire.

5.1.2 Expectations compared with results
When comparing expectations of the participants regarding the scores of the dimensions with the scores that the participants gave to these dimensions at the end of the workshop, there appears to be not that much variation. All dimensions seem to score positively except for social learning, but all scores are deviating less than 1 point from the expectation which shows that the workshop brought what people expected when looking at these dimensions.

5.2 Final reflection and recommendations
During the final discussion with Chris Seijger, Jantsje van Loon, Maaike van Aalst and other tool developers and experts and I, there were several subjects discussed about the assessment framework where there was room for improvement. In this section I will discuss these subjects and based on that, make some recommendations on what should be taken into account when taking the next step in assessing tools within the project of strategic delta planning.

1. In the questionnaires there should be question(s) that distinguishes participants among each other. For example questions about their background (job experience) or their nationality. The responses of the participants can then be linked to these characteristics and conclusions can be drawn from this. An example of this is that urban planners do not like to use MapTable because they cannot put in their creativity in the tool. If the background of the participants is known, perhaps negative and positive responses about the tool can be linked to their background and perhaps a conclusion can be drawn from this. What can also be added in the questionnaires is to add a section where participants can fill in categories for their motivation to join the workshop (money, for their own interest or being a representative of a certain company for example) and like this link the responses to people. Another option is to ask for their names on the questionnaires, but this might not be appreciated by the participants as a questionnaire should be filled in anonymously and not traceable back to individuals.

2. Overall, the tools score better than the participants expected and on average all dimensions are well-covered as all were scored a 7 or higher. However, when multiple tools are evaluated at once, the questions need to be made more distinct. Questions can be formulated for each tool, for example: what parts of the entire workshop were most important to you? Or: which tool scored the highest in the dimension of facilitating communication? This will reveal differences among tools, which can be an interesting outcome. What can also be interesting is to see whether tools score higher individually or do the participants give higher scores when the tools are applied as one big tool.

3. There is the need to make a division in the questionnaires in three themes: questions about the process, questions about the content and questions about the context. This will make it a more comprehensive framework. A large part of the questions in the questionnaires are about the

process. There are some questions about the content but context is missing in the questionnaires. Sadie, one of the experts in the meeting, gave as advice to check an article by Hassenforder et al. (2015) about a framework on the comparison of participatory processes (COPP). This article explains that the context dimension is important in participatory processes because differences in contextual circumstances can lead to different outcomes when implementing a specific participatory process method.

4. The questions that are posed in the questionnaires need to have a more neutral character. The way the questions in the questionnaires are posed now, implies that the tool has some effect. For example, the questions in the evaluation for the tool developers are all posed like the tool should do something. These questions need to be made more neutral to prevent positive inclined questions. Examples of these questions will be provided in the recommendation section of this chapter. What also can be changed about the questions in the questionnaires is to pose critical questions like for example: were there any things that you did not like about the workshop? And thirdly, the questions in the questionnaires need to be made more in line with each other so that a similar question on every dimension is posed in every questionnaire.

5. Rating on a small scale (1-5) or a larger scale (1-10) both has advantages. In the questionnaires used in the workshop, a 1-10 scale is chosen. The reason for this was because some people never give a full score as they perceive there is always room for improvement. If people never give a full score, this has a smaller influence on a larger scale than on a smaller scale. A smaller scale, however, increases the consistency and is therefore more meaningful.

6. During the meeting we also discussed the Excel file I created that helps to easily and quickly get an overview of the results from the scores of the participants. In this file you are required to enter the average numbers that the participants scored. However, the tool developers mentioned that an Excel file with all questions in it, that can be filled in by the participants themselves can also be a handy asset. All the scores including the averages will be in this Excel file already and can then be copied to the other Excel file which will give you an overview of the results. I will try to make such an Excel file in the final month of my internship.

Concluding from these discussion points, several recommendations can be made. The recommendations are:

- Pose question(s) in the questionnaires that distinguishes participants among each other. For example questions about their background (job experience) or their nationality.
- Add a question where participants fill in their motivation to join the workshop with examples like: money, for their own interest or being a representative of a certain company, etc.
- When multiple tools are evaluated at once, the questions need to be made more distinct like for example: what parts of the entire workshop were most important to you? Or: which tool scored the highest in the dimension of facilitating communication?
- When there is a large number of participants in the workshop, look at the distribution of the scores to see if there is statistical significance.
- Possibly add questions about the role of the facilitator in the questionnaires as this can influence the score in the dimensions.

- There are several frameworks to evaluate similar participatory activities but are there also standardized questions? If there was a standardised framework to evaluate participatory processes, this could make comparison across studies possible which could give interesting results.
- Continue to test the framework and the questionnaires. The more the assessment framework is being tested, the more feedback there will be and the better the framework will become. Also test the framework separately for each tool to distinguish different scores on dimensions per tool.
- Questions in the questionnaires can be asked in a more neutral way. Sadie mentioned that this can be done by adjusting the scale. For example, here is the same question posed in different ways but with a different scale:

I found Tool X easy to use in this workshop: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree, 5=do not agree or disagree.

How easy did you find using Tool X in this workshop? : 1=too difficult to use, 2=difficult, 3=mostly easy, 4=very easy, 5=I did not use the tool.

Both options are fine to use as long as the scales and ranking titles are appropriate. Another example:

Please select the response that most closely matches your experience: I found Tool X _____ - 1 too difficult to use, 2 difficult to use, 3 mostly easy to use, 4, very easy to use, 5 I did not use Tool X.

In a document by the University of California[2], it is mentioned how to write neutral survey questions. In this document appropriate ranking titles are mentioned. Concluding from this document, what could be changed in the questionnaires as they are now are the ranking titles. Now only two ranking titles are used: disagree and agree or unlikely and very likely. This can be improved by adding more ranking scales. If for example a question is posed about people's attitude (like in the post-questionnaire), these ranking scales can be used:

Strongly disagree	or:	Not very effective
Disagree		Somewhat effective
Neither agree or disagree		Moderately effective
Agree		Very effective
Strongly agree		Not sure

If people's aspirations or intentions are asked (like in the pre-questionnaire), questions can be posed like: "do you expect to…" (as is done already) and use these ranking scales:

Definitely no	or:	No chance
No		Very little chance
Uncertain		Unsure
Yes		Some Chance
Definitely yes		Very good chance.

Footnote 2: http://vcsa.ucsd.edu/_files/assessment/workshops/2013-02-21_Writing-Good-Survey-Questions-Handouts.pdf

Another thing that is mentioned in this document[2] is that leading questions can be avoided. An example is:

Bad example: To what extend do you agree that opportunities for community service are important to you?

Better example: To what extend do you agree or disagree that opportunities for community service can be important to you?

A lot of questions in the questionnaires are posed like for example: Your perception of other participants has changed. This could be changed into: to what extend do you agree or disagree that your perception of other participants has changed?

- Another recommendation is that the context theme can be added to the questionnaires. This can be done by posing questions about the context of the situation where the tool is being applied. In the COPP framework by Hassenforder et al. (2015), there are 5 variables that distinguish contexts into categories. These variables are:

1. Target system elements: this variable allows for categorisation and a deeper understanding of the system elements which are the target of the process. They can be seen as elements that are part of the entire system and can be environmental like water and forests but also economic, social, political, etc.

2. Levels of governance influencing target system elements: this is determined by the level of decision making that is influencing the system under discussion. Levels: Macro (national or larger), Meso (subnational) and Micro (villages or groups of villages).

3. Other past/present intervention attempts: distinguishes contexts between situations where many initiatives have already been implemented and situations where a few or even no initiatives have been implemented.

4. Pre-existing relationships among participants: levels: no pre-existing relationships, high degree of mistrust and conflict, moderate trust and conflict or good pre-existing relationships and trust.

5. Participants' understanding of target system elements: Two detectable attributes that distinguish whether participants state if they understand target system elements or not; either the majority does or doesn't.

Questions can be posed in the questionnaires about each of these variables to get a more distinct categorisation of differences in context. There does not have to be a question in the questionnaires for each variable but some questions can be posed to make a distinction. Potential questions can for example be:

1. The first variable can be asked in the evaluation for the tool developers. This can be a general overview of what the discussions will be about. This should be known by the tool developers at the start of the application of the PPT as they will prepare for the application of the tool to the specific situation. Q: What are the Target System Elements (these elements can be environmental like water and forests but also economic, social, political, etc. examples: livelihoods, water, forest, rubber plantations etc.) which will be discussed during the application of the tool?

2. The second variable can be asked to the participants in the pre-questionnaire. This can be a question about the background of the participants. As some participants will represent different parts of the government, the different levels of governance that influence the target system elements will become clear. Another advantage of a question like this is that there a question is posed about the background of the participants, which is another recommendation as I discussed in the final reflection. However, what has to be taken into account when discussing the context dimension is that not all stakeholders or representatives may be present during the workshop. Q: Please give a description of your current job function. If this is a governmental function: Which of the following levels of government does your work apply to the most? Macro (national or larger) /Meso (subnational) /Micro (villages or groups of villages).

3. The third variable can be asked to the participants about any previous intervention attempts. Q: Have any Participatory Planning Tools or similar approaches been applied in the past in this area? None / Few (1-2)/ Many (2 or above).

4. The fourth variable can also be asked to the participants about previous relationships among participants. Q: If there is any relationship with other participants, how would you categorise the relationship with most of the other participants:No pre-existing relationships/ High degree of mistrust and conflict/ Moderate trust and conflict/ Good pre-existing relationships and trust. Another possibility: Please indicate below per category, the relationship you have with the partcipants (For example if you see 3 participants with which you have a good relationship, put a 3 in the last category):No pre-existing relationships/ High degree of mistrust and conflict/ Moderate trust and conflict/ Good pre-existing relationships and trust.

5. The fifth variable has to be asked to the participants about whether they understand the target system elements. The tool developers can mention what they believe are the main target system elements in this area after they filled in their questionnaire. Q: Do you understand the target system elements that have been mentioned by the tool developers? No / Some/ Yes.

6. Conclusions

During my internship I created an assessment framework to assess Participatory Planning Tools. Along the way, I took several steps to create and improve this framework to eventually, after the course of 5 months, come to a complete and tested assessment framework. In this final chapter I will provide an answer to the main question of this research: **"How can Participatory Planning Tools be assessed through an assessment framework?"** by discussing the key-conclusions I have made for each step that I have taken during my internship. These conclusions can be seen as main aspect to take into account when assessing tools through an assessment framework.

6.1 Conclusions from creating the assessment framework

1. One of the things I concluded when creating the assessment framework was that there have to be made certain trade-offs when it comes down to choosing dimensions you want to evaluate. There are a lot of possible dimension of tools that I found during my literature research and goal of tools that I found through interviews that need to be taken into account when assessing tools. Also by talking to different experts about what is critically important to put in the framework, I got a lot of different opinions which you all want to take into account. The tool developers have certain goals which should be evaluated in any case but from the literature there emerged many more roles that tools could play in decision making. If you want to evaluate through questionnaires, you can only ask a limited amount of questions and therefore trade-offs have to be made in the questions that you ask and consequently in the dimensions that you evaluate. This was sometimes a difficult task. The assessment framework is a framework where trade-offs have been made while it was formulated and therefore the framework becomes easily susceptible to criticism. This is the case because people can recognise certain roles that tools can potentially play that were not taken into account in my framework and were therefore not evaluated. In case participants of the workshop felt like there was a dimension or goal not evaluated but should be in the framework, I added an extra comment box at the end of the questionnaires so they were able to mention it. If for example several participants felt like there was an aspect of tools that was not evaluated through the framework, I can add this aspect in the next questionnaire and through this, improve the framework.

2. Another conclusion I made during the creating of the assessment framework is that there is a difference in the application of PPT's in The Netherlands and countries like for example the USA or countries in Southeast Asia. Through interviews with the tool developers I have found out that in The Netherlands PPT's are applied with a focus on the long term and in an interdisciplinary way. In the USA tools are commonly applied when looking at the short term. Also, one of the PPT's, Participatory Scenario Development, when applied in The Netherlands it is focussed on climate change and in for example in Bangladesh it is more focussed on socio-economic development. Additionally, there are differences in the view of people as a result of different cultures or background that require a different approach when applying tools. Dutch companies apply tools in the Dutch environment, where they are made for and where they work. Sometimes these companies try to take tools abroad and try to apply them in a totally different situation. This might however bring some complications. For example, in general the Dutch people are very open about their interests and people from Asia could generally be withholding their actual opinion and interests about certain matters. This consequently can lead to a process where integration is more difficult to achieve. Also in Asian countries there usually is a clear hierarchy, for example State-

Province-Municipality with the state being the most powerful actor. Also during the application of PPT's, one company can send its director to participate and another company can send an employee. This creates power differences and can create an environment where people do not dare to share their true interests. In The Netherlands this is often less of an issue. The fact that there are differences between countries and cultures needs to be accounted for when tools are applied.

6.2 Conclusions from testing the assessment framework

Adding to the previous conclusion, while testing the assessment framework in a session with Maaike, I found out that through this difference in culture and background of the participants, several words that is common language for water managers, can be interpreted differently by people with a different background. For example a word like transparency can be a vague concept for people that do not have a background in social science. It is therefore important to test the framework and the questionnaires with someone who understands the setting and participants of the workshop before it is actually applied in a real session. The testing of the framework prior to its application in Vietnam made me change the questionnaires to be more specified to the situation in Vietnam.

Another conclusion is when questionnaires are made, to pay attention to make them short, easy and fun to fill in. Most people do not like to fill in questionnaires and by asking not too many open questions, adding rateable statements and adding illustrative images, the questionnaires become easy and more fun to fill in and this increases the motivation of people to actually fill in the questionnaires.

The results from the questionnaires are scores that the tool developers and participants have given to a certain dimension. But what do these numbers actually say? The differences in scores between (1) the goal and the results and (2) the expectation and the result can be seen as the goal or expectation being achieved or not. However, in my opinion if the setting of this workshop was different the numbers would have been more meaningful. The setting of this workshop, where the participants came to learn about strategic delta planning and PPT's, is more elaborately explained in chapter 2.4. This setting differs of a setting where participants take part in the workshop to communicate their interests and actually have a stake in representing their sector/ company/ government department/ village/ etc. I believe that if this was the case, the numbers would have been more meaningful as people truly want to achieve something for the benefit of the area under discussion. Also what would have been interesting is that each tool was evaluated separately during the workshop. If this was the case, there was a different score per dimension for every tool and the tools could have been compared regarding their scores on each dimension. This workshop's setting, where the tools were intertwined in the entire workshop, unfortunately made this impossible. I hoped to be able to evaluate the tools separately in a workshop in The Netherlands at one point so that the tools could be compared. As a result, the different scores per dimension can expose differences in roles of the tools. Unfortunately there was no opportunity for me to test the framework separately at a workshop in The Netherlands.

Also because the sample size was not that big (3 evaluations by the tool developers, 28 pre-questionnaires and 26 post-questionnaires) the results will not be statistically significant. With a larger sample size and the assessment framework being tested more and more, the results will become more reliable and statistical conclusions could be drawn from the results. However, for this

to be achieved, the questions in the questionnaires will have to be made more in line with each other so that a similar question per dimension is posed in each questionnaire. Making sure that the questions in the questionnaires are more in line with each other is, however, not easy as people that are filling in the questionnaires have a different background and different knowledge about tools (for example the tool developers and the participants). This means that some people need a more elaborate explanation on certain aspects than others. When I made the questionnaire for the workshop, this was one of the things I wanted to take into account and I thought it was difficult to formulate the questions and statements in such a way that all the participants would be able to understand them. Having a lot of participants with different backgrounds, levels of experience in the work field and knowledge about the area under discussion, requires a detailed questionnaire with information so that everyone understands the context.

6.3 Conclusions from reflecting upon the assessment framework

The assessment framework is created for the tool developers to get more insight into the roles that tool play and the function of tools in decision making. Not only the results from the application of the framework in Vietnam were useful but a reflection session upon these results also helped the tool developers. As described in chapter 4.3, the session provided several insights to the tool developers which the discussion about the results helped to reveal. A conclusion is therefore that not only the results are important but also a discussion meeting about these results.

During the reflection meeting, also the role of the facilitator during the application of the tool was discussed. Concluding from this discussion, I identified several roles of the facilitator:

- Initiating the drawing; by starting to draw, people are motivated to draw as well and are less hesitant to put something on paper. The facilitator makes sure to mention that what you draw does not have to be perfect.
- Guiding the discussions; after a discussion by participants, draw a conclusion from it, write it down and continue to talk about the next challenge or to see what can be used for a shared vision for the area.
- Trying to involve everyone; making sure to give people that are less dominant when it comes down to giving their opinion also a moment to speak up.
- Also the facilitator provided input regarding ideas for solutions, strategies or problems in the area.

These roles can be taken into account when assessing tools as the facilitator can have an influence on the score that is given to the dimensions by the participants.

Another conclusion is that there are different ways of posing questions in questionnaires and to formulate a good questionnaire is a difficult task. I explained the different ways of posing questions in chapter 2.1 which made me realise that formulating a good questionnaire is harder than I thought. To find out the answer that you want, the most obvious question might not be the correct one. Even after the reflection discussion with the experts, I found out that the questions in the questionnaires were still not perfect as they could be positively inclined. In the recommendation section I explained how this can be prevented for the next time my framework is applied.

Several other conclusions were drawn from this meeting which have been mentioned in the recommendations in chapter 5.

References

Scientific articles

Foley, J. A., DeFries, R., Asner, G. P., Barford, C., Bonan, G., Carpenter, S. R., ... & Helkowski, J. H. (2005). Global consequences of land use. *science*, *309*(5734), 570-574.

Goosen, H., Janssen, R., & Vermaat, J. E. (2007). Decision support for participatory wetland decision-making. *Ecological Engineering*, *30*(2), 187-199.

Hasan, S., Evers, J., & Zwarteveen, M. (to be published) Going beyond the normative evaluation: an approach to study participatory planning tools in strategic delta planning processes Or, "All things are what they are in relation to other things, not because of essential things": an approach to study participatory planning tools in strategic delta planning processes.

Hassenforder, E., Smajgl, A., & Ward, J. (2015). Towards understanding participatory processes: Framework, application and results. Journal of environmental management, 157, 84-95.

Meyer, H., Bregt, A., Dammers, E., Edelbos, J., Berg, J. V. D., Born, G. J. V. D., ... & Heun, G. (2015). New perspectives for urbanizing deltas: a complex adaptive systems approach to planning and design: Integrated Planning and Design in the Delta (IPDD).

Meyer, H., & Nijhuis, S. (2011). Towards a typology of urbanizing deltas. not yet published.

Patel, M., Kok, K., & Rothman, D. S. (2007). Participatory scenario construction in land use analysis: an insight into the experiences created by stakeholder involvement in the Northern Mediterranean. Land Use Policy, 24(3), 546-561.

Pelzer, P., Arciniegas, G., Geertman, S., & de Kroes, J. (2013). Using MapTable® to learn about sustainable urban development. In *Planning support systems for sustainable urban development* (pp. 167-186). Springer Berlin Heidelberg.

Peterson, G. D., Cumming, G. S., & Carpenter, S. R. (2003). Scenario planning: a tool for conservation in an uncertain world. *Conservation biology*,17(2), 358-366.

Seijger, C., Douven, W., van Halsema, G., Hermans, L., Evers, J., Phi, H.L., Fida a Khan, M., Brunner, J., Pols, L., Ligtvoet, W., Vermoolen, M., Hasan, S., Hoang, V.T.M. (2016) An analytical framework for strategic delta planning: negotiating consent for long-term sustainable delta development. Proposed journal: *Environmental planning and management.*

Slabbers, S., Noorman, K.J., & Swart B. Bosch en Slabbers flyer Lab R+E+M: Laboratorium voor ruimte, energie en milieu.

Thissen, W. A., & Twaalfhoven, P. G. (2001). Towards a conceptual structure for evaluating policy analytic activities. *European Journal of Operational Research*, *129*(3), 627-649.

Thissen, W.A., & Walker, W.E. (2012) Public Policy Analysis: New Developments.

Wesselink, A., Paavola, J., Fritsch, O., & Renn, O. (2011). Rationales for public participation in environmental policy and governance: practitioners' perspectives. *Environment and Planning A, 43*(11), 2688-2704.

Others

Report on Delta Envisioning Support System (DENVIS) Workshop (Evaluation by S. Hasan): http://strategic-delta-planning.unesco-ihe.org/sites/strategic-delta-planning.unesco-ihe.org/files/workshop_report_denvis.pdf

References used for formulation conceptual framework:

Scientific articles

Abelson, J., & Gauvin, F. P. (2006). *Assessing the impacts of public participation: Concepts, evidence and policy implications*. Ottawa: Canadian Policy Research Networks.

van Asselt, M., & Rijkens-Klomp, N. (2002). A look in the mirror: Reflection in participation in integrated assessment from a methodological perspective. Global Environmental Change, 12, 167-184)

Goosen, H., Janssen, R., & Vermaat, J. E. (2007). Decision support for participatory wetland decision-making. *Ecological Engineering*, *30*(2), 187-199.

Hasan, S. PhD research proposal: What do participatory planning tools do in strategic delta planning processes?

Hasan, S., Evers, J., & Zwarteveen, M. (to be published) Going beyond the normative evaluation: an approach to study participatory planning tools in strategic delta planning processes Or, "All things are what they are in relation to other things, not because of essential things": an approach to study participatory planning tools in strategic delta planning processes.

Hassenforder, E., Smajgl, A., & Ward, J. (2015). Towards understanding participatory processes: Framework, application and results. Journal of environmental management, 157, 84-95.

Nikkhah, H. A., & Redzuan, M. (2009). Participation as a medium of empowerment in community development. *European Journal of Social Sciences*, *11*(1), 170-176.

Patel, M., Kok, K., & Rothman, D. S. (2007). Participatory scenario construction in land use analysis: an insight into the experiences created by stakeholder involvement in the Northern Mediterranean. *Land Use Policy*, *24*(3), 546-561.

Pelzer, P., Arciniegas, G., Geertman, S., & de Kroes, J. (2013). Using MapTable® to learn about sustainable urban development. In *Planning support systems for sustainable urban development* (pp. 167-186). Springer Berlin Heidelberg.

Reed, M., Evely, A. C., Cundill, G., Fazey, I. R. A., Glass, J., Laing, A., ... & Stringer, L. (2010). What is social learning?. Ecology and Society.

Thissen, W. A., & Twaalfhoven, P. G. (2001). Towards a conceptual structure for evaluating policy analytic activities. *European Journal of Operational Research*, *129*(3), 627-649.

Volk, M., Lautenbach, S., van Delden, H., Newham, L. T., & Seppelt, R. (2010). How can we make progress with decision support systems in landscape and river basin management? Lessons learned from a comparative analysis of four different decision support systems. *Environmental Management*, *46*(6), 834-849.

Wesselink, A., Paavola, J., Fritsch, O., & Renn, O. (2011). Rationales for public participation in environmental policy and governance: practitioners' perspectives. *Environment and Planning A*, *43*(11), 2688-2704.
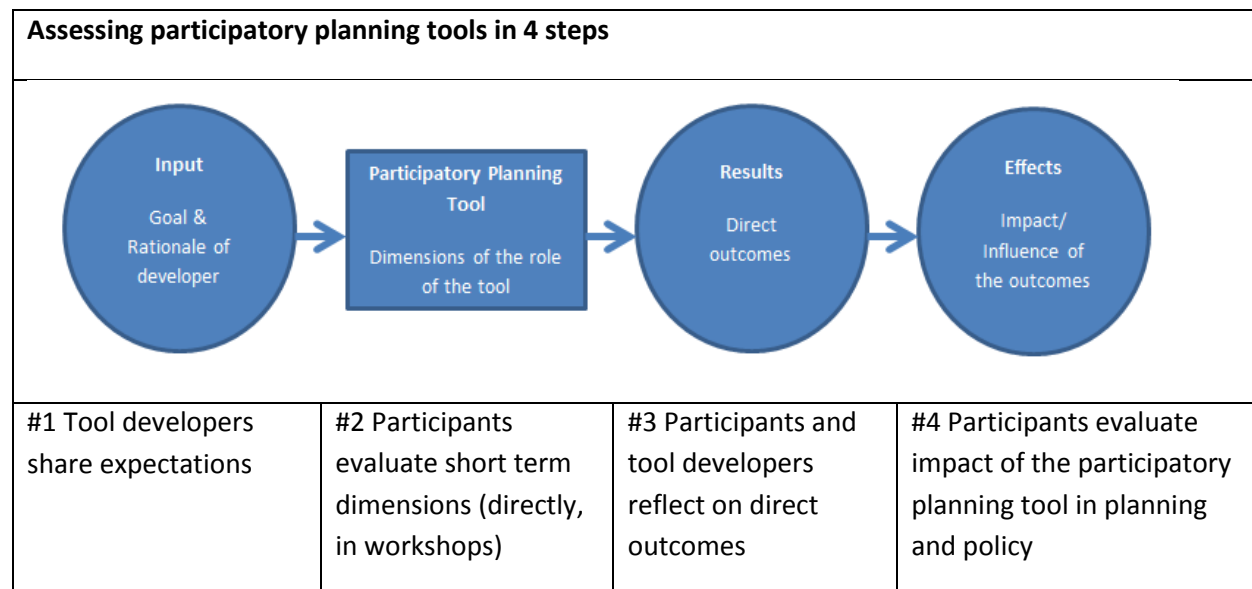
Others

Report on Delta Envisioning Support System (DENVIS) Workshop (Evaluation by S. Hasan): http://strategic-delta-planning.unesco-ihe.org/sites/strategic-delta-planning.unesco-ihe.org/files/workshop_report_denvis.pdf

Werkboek #10 Atelier Kustkwaliteit 2013: Veiligheid en kwaliteit van de Nederlandse kust. Chapter 7 (Charette Workbook)

<u>Questionnaire for tool developers</u>

This questionnaire is distributed before [DENVIS/ Design Charettes / Part. Scen. Dev.] is applied in the [training course or workshop] in [name areaof application]. This questionnaire will explore your expectations on the type and goals of participatory planning. The results will be compared with participant evaluation forms to explore how they have rated [training course or workshop]. The image below shows the various steps in the assessment framework, this questionnaire covers #1.

Assessing participatory planning tools in 4 steps			
#1 Tool developers share expectations	#2 Participants evaluate short term dimensions (directly, in workshops)	#3 Participants and tool developers reflect on direct outcomes	#4 Participants evaluate impact of the participatory planning tool in planning and policy

<u>Type of participation</u>

Your planning tool is a participatory one, which facilitates participation of different groups of people in a planning or policy process. The questions 1-3 explore the kind of participation you aim for with your tool.

1. Different categories of participation exist, ranging from low degrees (informing, consulting) to high degrees (self-mobilisation). Please tick the circle what type of participation you are aiming for with your tool in this training course.

◯ **1. Passive:** People participate by being told what is going to happen or what has already happened without listening to people's responses.

◯ **2. Informing:** People participate by answering questions that are posed by researchers by for example surveys or similar approaches. People have no opportunity to be influential and research findings are not shared.

◯ **3. Consulting:** People participate by being consulted and external professionals listen to their views. These professionals define the problems and solutions but modify them according to the responses of the people. There is however no share in decision making.

◯ **4. Functional:** People participate by forming groups to meet to meet predetermined objectives related to the project. This form of participation tends to be implemented after major decisions are already made and may involve shared decision making.

◯ **5. Interactive:** People participate in joint analysis. This leads to action plans and new local institutions or the strengthening of existing ones. It involves interdisciplinary methodologies with multiple perspectives and a learning process.

○ **6. Self-mobilisation:** People participate by taking initiatives independent of external institutions. They develop contacts with these institutions for advice but they remain in control over their own resources.

2. Different reasons exist to involve participants in the planning process. Please tick the box that most appropriately describes the reason for participation in the [training course or workshop] in which your tool is applied. Each box discusses a different motive for participation.

☐ *Instrumental participation* The core goal of participation is to make decisions more legitimate and to improve results. Participation aims to restore public credibility, diffuse conflicts, justify decisions, and limit future challenges to implementation by "creating ownership".	☐ *Substantive participation* Non-experts see problems, issues and solutions that experts can miss and therefore the goal of participation is to increase the breadth and depth of information and thereby improve the quality of decisions.
☐ *Normative participation* Participation is aimed to empower all stakeholders and includes everyone who is affected by a decision. Participation is thus undertaken from a democratic point of view.	☐ *Legal participation* Participation is a formality and part of the decision making process as a procedure or as a way to comply with the rules.

3. [DENVIS/ Design Charettes/ Part. Scen Dev.] is applied in a bigger policy/planning process. In what stage is your tool applied? Please tick the appropriate box.

Begin stage	Middle stage	End stage
☐ Initiation of a project or policy and awareness raising for problems and strategies.	☐ Either 1.Reviewing of strategies that have been formulated before or 2. The developing of a shared vision where stakeholders agree on to continue planning.	☐ Fine tune plans, strategies & designs that are soon to be implemented.
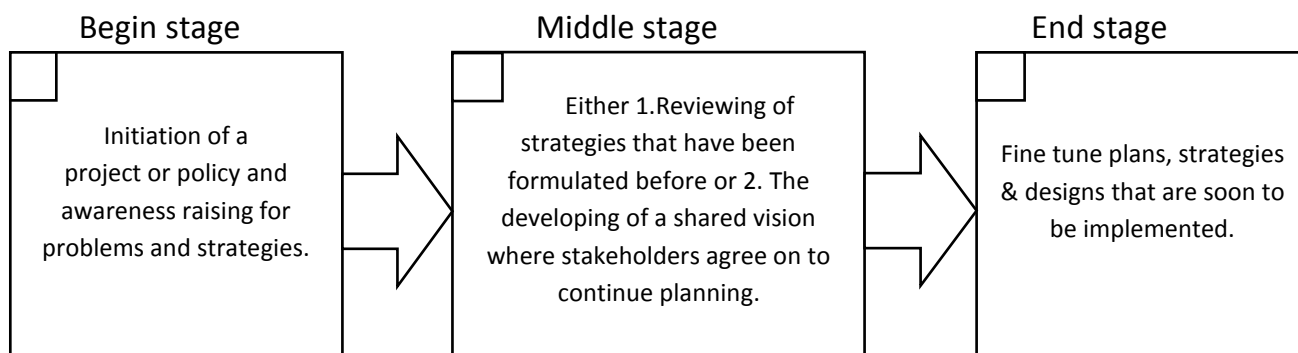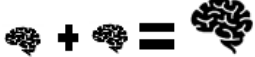
Dimensions for your participatory planning tool

In this assessment we distinguish between short- and longer-term dimensions of participatory planning. What are important aspects you aim to achieve with your tool? Questions 4 to 9 contain statements on what you expect your tool should do directly in the [training course or workshop]. Please rate the following statements on a 1-10 scale how relevant they are for your tool by encircling a number (1 = not relevant, 5 = somewhat relevant, 10 = very relevant). The term 'tool' should be broadly interpreted; it covers both hardware and facilitators/moderators applying the participatory planning tool or approach. If a statement is unclear to you, please tick the unclear box.

	The tool should facilitate communication between participants.

  4. Facilitating Communication	1 (not relevant)	2	3	4	5	6	7	8	9	10 (very relevant)		Unclear ☐

	The tool should facilitate knowledge sharing among participants.											
   5. Sharing Knowledge	1 (not relevant)	2	3	4	5	6	7	8	9	10 (very relevant)		Unclear ☐
  6. Social Learning	The tool should contribute to a better understanding of shared interests, values and perceptions towards the problems and strategies.											
	1 (not relevant)	2	3	4	5	6	7	8	9	10 (very relevant)		Unclear ☐

	The tool should support a level playing field in which participants can freely provide their input.											
  7. Power Differences	1 (not relevant)	2	3	4	5	6	7	8	9	10 (very relevant)		Unclear ☐

	The tool should stimulate integration between participants from different sectors (for instance agriculture and industry).											
  8. Integration	1 (not relevant)	2	3	4	5	6	7	8	9	10 (very relevant)		Unclear ☐

	The tool should facilitate agreement among participants on main content outcomes (for instance agreement on how to resolve the 'too much' 'too little' 'too dirty' problems of water in a particular region).	
9. Level of Agreement		
	1 2 3 4 5 6 7 8 9 10 (not relevant) (very relevant)	Unclear ☐

In addition to the above short-term dimensions of participatory planning, you could have other dimensions or goals that are relevant for your participatory planning tool. Please rate the statements in questions 10-15 on a 1-10 scale how relevant they are for your tool by encircling a number (1 = not relevant, 5 = somewhat relevant, 10 = very relevant). If a statement is unclear to you, please tick the unclear box.

10. The tool should contribute to a faster planning process, since the amount of time to come to a decision is decreased.
(not relevant)   1   2   3   4   5   6   7   8   9   10   (very relevant)   Unclear ☐

11. The tool should help to indicate synergies (joint gains) between interests and strategies of the participants.
(not relevant)   1   2   3   4   5   6   7   8   9   10   (very relevant)   Unclear ☐

12. The tool should result in short term actions that take the long term into account.
(not relevant)   1   2   3   4   5   6   7   8   9   10   (very relevant)   Unclear ☐

13. The tool should account for uncertainties that may affect the problems and strategies discussed.
(not relevant)   1   2   3   4   5   6   7   8   9   10   (very relevant)   Unclear ☐

14. The tool should create a common understanding among participants of the problems and long term vision for [the area].
15. The tool should result in strategies to come to a (long term) vision.
(not relevant)   1   2   3   4   5   6   7   8   9   10   (very relevant)   Unclear ☐

Perhaps you have other dimensions or goals with your participatory planning tool that are relevant but not represented by the statements 4 to 15. You could explain them below and rate their relevance on a 1-10 scale (1 = not relevant, 5 = somewhat relevant, 10 = very relevant).

Other
dimension: _____ .

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Other
dimension: _____ .

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

We are grateful for your effort in filling out this questionnaire. Should you have any comments please put them in the box below or contact us in person or by e-mail (joerie.vanderstroom@deltares.nl, chris.seijger@deltares.nl).

Comments:

Annex (2/5) Pre-Questionnaire [name workshop or training course]. For example: 'Participatory planning tools for strategic delta planning and management' training course

We kindly ask you to fill in this questionnaire about your background and expectations for the [training course or workshop]. This questionnaire is part of an assessment framework to evaluate participatory planning tools. At the end of the week a second questionnaire will be distributed to obtain your feedback. Your anonymity will be guaranteed in the processing thereof. Thanks in advance for your cooperation!

The questions 1 to 6 are open-ended questions on your motivation and expectation to attend this training course.

1. What is your motivation to join this [training course or workshop] on participatory planning [tools] for strategic delta planning and management?

Different types of knowledge exist; researchers from universities and research institutes bring different knowledge to a workshop than policy makers in a ministry or local farmers.

2. Which kind of knowledge do you bring to this [training course or workshop]? (this could be more than one form of knowledge)

Scientific knowledge

This type of knowledge is mainly developed by experts and can either be based on natural science or social science. It is based on scientific models and methods. Examples of people with this knowledge are researchers at universities, research institutes, consultancy firms, etc.

☐

Bureaucratic knowledge

This type of knowledge is about the usefulness of policy and looks at standards and warrants of bureaucracy. An example of a person with this knowledge is someone who works at a governmental organisation and has a lot of knowledge about legal rules and administrative execution.

☐

Stakeholder knowledge

This knowledge is about the experiences of stakeholders or about knowledge of the context or location. It is about local experiences and insights. An example of a person with this knowledge is people who work at NGO's or local people with a lot of knowledge about the area under study ([name study area]).

☐

three   of know

-
-
-

4. What do you hope to learn or gain from this [training course or workshop]?

☐

☐   ☐   ☐

5. How many participants do you know already? I know   0-25% /   25-50% /   50-75% / ☐ 75-100% of the participants. Please tick the appropriate box.

6. Do you think that the [tools] presented in this [training course or workshop] play a role in planning processes of water/delta management?
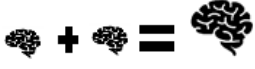
<table>
<tr><td>If yes, what role?

If not, why not?

</td></tr>
</table>

The questions 7 to 13 are statements on your participation in this [training course or workshop] and the expectations you have for this [training course or workshop]. You may rate the statements on a 1 to 10 scale by encircling a number (1 = unlikely, 5 = somewhat likely, 10 = very likely). If a statement is unclear to you, please tick the unclear box.

<table>
<tr><td colspan="2">7. The participatory aspect of the [tools] will improve the strategies and decisions that will be discussed for [the area].</td></tr>
<tr><td>(unlikely)   1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10   (very likely)</td><td>Unclear
☐</td></tr>
</table>

<table>
<tr><td rowspan="2">8. Facilitating Communication</td><td>In the [training course or workshop] I expect to communicate with other participants on problems and strategies for [the area].</td></tr>
<tr><td>(unlikely)   1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10   (very likely)   Unclear ☐</td></tr>
<tr><td rowspan="2">9. Sharing Knowledge</td><td>In the [training course or workshop] I expect to be able to share my knowledge with other participants on problems and strategies for [the area].</td></tr>
<tr><td>(unlikely)   1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10   (very likely)   Unclear ☐</td></tr>
</table>

	In the [training course or workshop] I expect to find shared interests, values and perceptions towards problems and strategies for [the area].											
10. Social Learning	(unlikely) 1	2	3	4	5	6	7	8	9	10 (very likely)		Unclear ☐

	In the [training course or workshop] I expect to be able to speak up freely on problems and strategies for [the area].											
11. Power Differences	(unlikely) 1	2	3	4	5	6	7	8	9	10 (very likely)		Unclear ☐

	In the [training course or workshop] I expect to learn about opportunities for cooperation with participants from other sectors than my own (example sectors could be fishery, environment, industry, agriculture).											
12. Integration	(unlikely) 1	2	3	4	5	6	7	8	9	10 (very likely)		Unclear ☐

	In the [training course or workshop] I expect to find agreement with the other participants on main problems and strategies for [the area].											
13. Level of Agreement	(unlikely) 1	2	3	4	5	6	7	8	9	10 (very likely)		Unclear ☐

We are grateful for your effort in filling out this questionnaire. Should you have any comments please put them in the box below or contact us in person or by e-mail (joerie.vanderstroom@deltares.nl, chris.seijger@deltares.nl).

Comments:

Post-Questionnaire [name workshop or training course]. For example: 'Participatory planning tools for strategic delta planning and management' training course

To be able to improve the [training course or workshop], we would like to ask you to fill in this questionnaire. The questionnaire consists of two parts. The first part contains questions on reaching agreement for the problems and strategies for [the area]. The second part contains statements on what the participatory planning [tools] did for you in the [training course or workshop]. We would like to thank you in advance for filling in the questionnaire. Your anonymity will be guaranteed in the processing of the results.

1. How would you rate the [training course or workshop] in general?										
(negative) 1	2	3	4	5	6	7	8	9	10	(positive)

2. Did you come to an agreement(s) for preferred strategies for [the area]?

If yes, what was it about?

If not, why not?

3. Do you perceive that your interests were taken into account in the final outcomes of the [training course or workshop]?

If yes, in what way?

If only partly, which parts were incorporated and which not?

6

If not, where could this come from that your interests were not taken into account?

4. What are the main problems of other participants in relation to problems and strategies for [the area]?

The second part of this questionnaire contains statements on what the participatory planning [tools] in the [training course or workshop] did for you. Please rate the following statements on a 1-10 scale how applicable you think they are for the [training course or workshop] by encircling a number. The term 'tool' should be broadly interpreted; it covers both hardware/maps etc. and facilitators/moderators applying the participatory planning tool or approach. If a statement is unclear to you, please tick the unclear box.

 <u>Facilitating Communication</u>

Please take a look at the image below. The image shows different streams of communication.
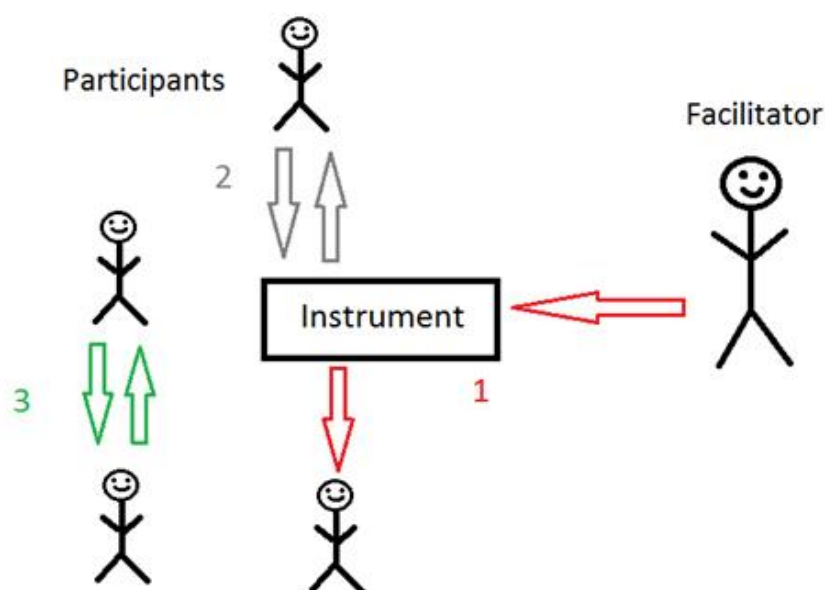
5. The information that was passed on by the facilitator through the instrument (as for example MapTable) was clear and understandable to you (Number 1).												
	(disagree)	1	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐

6. You were able to put your creative thoughts into the instrument (for example maps and sketches) and this information was clear and understandable for you (Number 2).												
	(disagree)	1	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐

7. You were able to exchange ideas and thoughts with other participants about problems and strategies in [the area] (Number 3).												
	(disagree)	1	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐

8. Participants always had the opportunity to respond to the ideas you suggested in the [training course or workshop].

											Unclear
	1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)	☐

 Sharing Knowledge

9. The participatory planning tools in the [training course or workshop] allowed you to share your knowledge with other participants.											
	1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐

 Social Learning

10. Your perception of other participants has changed.											
	1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐
11. Your perception of the interest of other participants has changed.											
	1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐
12. Your perception of problems in [the area] has changed.											
	1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐
13. Your perception of strategies has changed for [the area] (for example more focussed on the long term).											
											Unclear ☐

	1	2	3	4	5	6	7	8	9	10	
	(disagree)									(agree)	
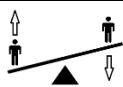
 Power Differences

14. The rules for how to participate during the [training course or workshop] were clear.											
	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

15. I have the impression I could speak freely, I was not withhold to express my views and opinions in discussions during the [training course or workshop].											
	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

16. It was clear how discussions on problems and strategies for [the area] would contribute to outcomes of the [training course or workshop].											
	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

 Integration

17. The [training course or workshop] has made you aware of trade-offs, or balances on goals that cannot be reached at the same time, between different sectors (e.g. fishery, agriculture, industry, housing).											
	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

18. Integration between different sectors was clearly stimulated during the [training course or workshop].												
	1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)		Unclear ☐

<u>Level of Agreement</u>

19. The [training course or workshop] resulted in a high level of agreement among participants on the main problems and strategies for [the area].												
	1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)		Unclear ☐

The final questions help us to look beyond the aspects currently addressed in the questionnaire.

Are there any aspects of participatory planning tools that were missing in this questionnaire but that you believe are important to evaluate?

Do you have any comments for improvement of the [training course or workshop], questionnaire, or do you have anything else to share?

1

This questionnaire is part of an assessment framework to evaluate participatory planning tools. The image below shows the various steps in this assessment framework. We are grateful for your efforts to fill in the pre- and post-questionnaire that are linked to step 2. Should you have any questions, please do not hesitate to contact us in person or by e-mail (joerie.vanderstroom@deltares.nl, chris.seijger@deltares.nl).

Assessing participatory planning tools in 4 steps

#1 Tool developers share expectations	#2 Participants evaluate short term dimensions (directly, in workshops)	#3 Participants and tool developers reflect on direct outcomes	#4 Participants evaluate impact of the participatory planning tool in planning and policy
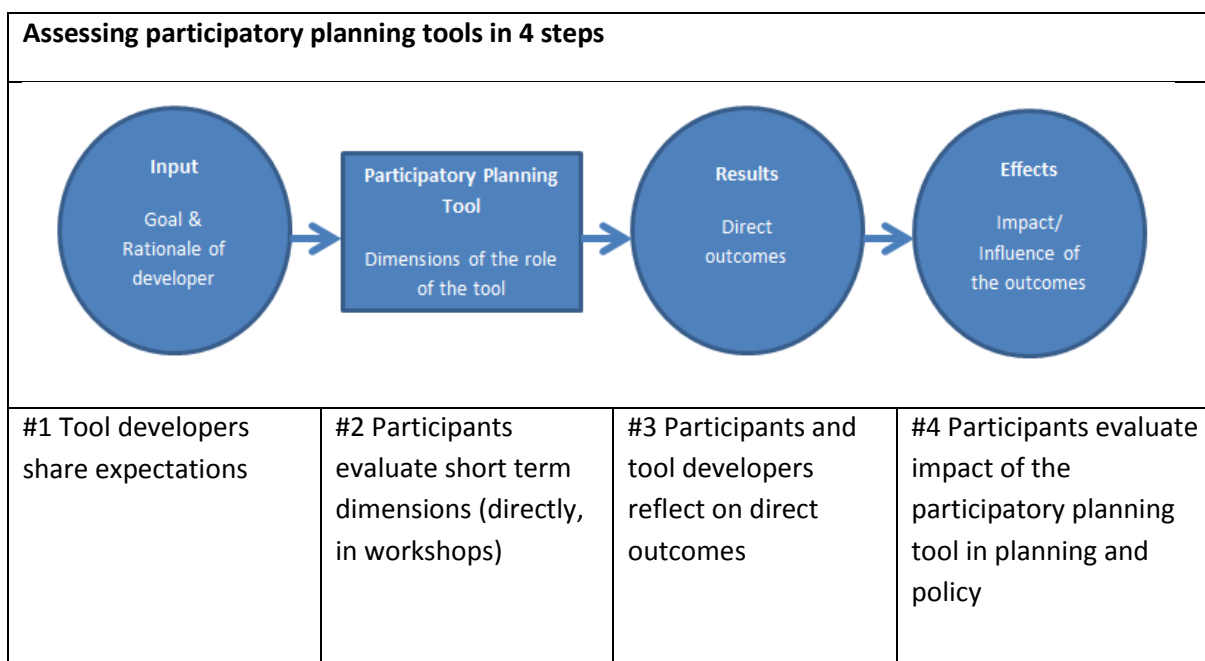
Annex (4/5) Results evaluation [name workshop or training course]. For example: 'Participatory planning tools for strategic delta planning and management' training course

We kindly ask you to fill in this questionnaire about the results of the [training course or workshop] in [location and month + year]. This questionnaire is part of an assessment framework to evaluate participatory planning tools. Keep in mind that these results are about the immediate results, up to 6 months after the [training course or workshop] and not about the impact or influence they might have on the long term (6 months to 3 years).

Your anonymity will be guaranteed in the processing thereof. Thanks in advance for your cooperation!

Could you indicate whether you participated in the [training course or workshop] as a   participant or as a facilitator?   Participant ☐   Facilitator ☐

The first question is about the immediate results and outcomes of the [training course or workshop].

1. Which outcomes and results have been generated by the [training course or workshop]? Please tick the boxes that you think are applicable.

☐ An inventory of ideas/goals or objectives what to do in the area on which the [training course or workshop] focused on, was made.

☐ A new project is initiated.

☐ Scenarios to assist long-term planning in a time-horizon of 30 to 100 years.

☐ Strategies and/or plans have been tested in different scenarios using a time-horizon of 30 to 100 years.

☐ Alternative solutions to problems in the area have been explored.

☐ An implementation strategy was developed to implement strategies and plans.

☐ Social support for decisions/strategies has increased.

☐ Trust and confidence in the possible planning outcomes (strategies/plans/projects) has increased.

☐ Short term actions for different groups of people have been identified.

Perhaps there are other results from the [training course or workshop] that are relevant but not represented by the previous statements. You may list them below.

Other:_____.

Other:_____.

Questions 2 to 11 are statements on the immediate outcomes up to 6 months after the [training course or workshop]. The questions are related to the 6 key dimensions in the assessment framework that were also assessed in previous steps. You may rate the statements on a 1-10 scale by encircling a number (1 = disagree, 10 = agree). If a statement is unclear to you, please tick the unclear box.
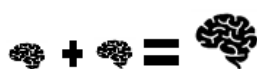
 Social Learning

2. In the months after the [training course or workshop], my perception of the interests of other participants changed.												
		1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)										(agree)	

3. In the months after the [training course or workshop], my perception of problems in [the area] changed.												
		1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)										(agree)	

4. In the months after the [training course or workshop], my perception of strategies for [the area] changed.												
		1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)										(agree)	

5. Did you discuss the outcomes and things you have learned in the [training course or workshop] with other people in your network?   ☐ Yes ☐ No

6. If yes, people in your network disagreed or agreed with the new insights on interests of other participants.												
		1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)										(agree)	

7. If yes, people in your network disagreed or agreed with the new insights on problems in [the area].												
		1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)										(agree)	

8. If yes, people in your network disagreed or agreed with the new insights on strategies for [the area].													
		1	2	3	4	5	6	7	8	9	10		Unclear ☐
	(disagree)											(agree)	

 Power Differences

9. In the months after the [training course or workshop], the playing field among stakeholders was more levelled than before (by for example, empowering less-powerful stakeholders).													
		1	2	3	4	5	6	7	8	9	10		Unclear ☐
	(disagree)											(agree)	

 Integration

10. In the months after the [training course or workshop], a more integrated approach and understanding on problems and strategies in [the area] appeared (integration between sectors such as agriculture, industry, urban planning).													
		1	2	3	4	5	6	7	8	9	10		Unclear ☐
	(disagree)											(agree)	

 Level of Agreement

11. In the months after the [training course or workshop], there seemed to be a higher level of agreement among participants on the main problems and strategies for [the area].													
		1	2	3	4	5	6	7	8	9	10		Unclear ☐
	(disagree)											(agree)	

The questions 12 [and 13; to 14] are additional statements on the outcomes of the [training course or workshop]. You may rate the statements on a 1-10 scale by encircling a number (1 = disagree, 10 = agree). If a statement is unclear to you, please tick the unclear box.

12. The [training course or workshop] helped to indicate synergies (joint gains and shared strategies) between interests and strategies of the different participants.											Unclear
1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)		☐

13. Because of the [training course or workshop], difficulties that previously constrained the planning process were overcome.											Unclear
1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)		☐
14. [This question is only for the training course:] The participatory aspect of the training course improved the strategies and outcomes that were generated for [the area].											Unclear
1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)		☐

The final questions help us to look beyond the aspects currently addressed in the questionnaire.

Are there any aspects of the immediate outcomes and results of the participatory planning tools that were missing in this questionnaire but that you believe are important to evaluate?

This questionnaire is part of an assessment framework to evaluate participatory planning tools. The image below shows the various steps in this assessment framework. We are grateful for your efforts to fill in this Results-Evaluation that is linked to step 3. Should you have any questions, please do not hesitate to contact us in person or by e-mail (joerie.vanderstroom@deltares.nl, chris.seijger@deltares.nl).

Assessing participatory planning tools in 4 steps			
#1 Tool developers share expectations	#2 Participants evaluate short term dimensions (directly, in workshops)	#3 Participants and tool developers reflect on direct outcomes	#4 Participants evaluate impact of the participatory planning tool in planning and policy
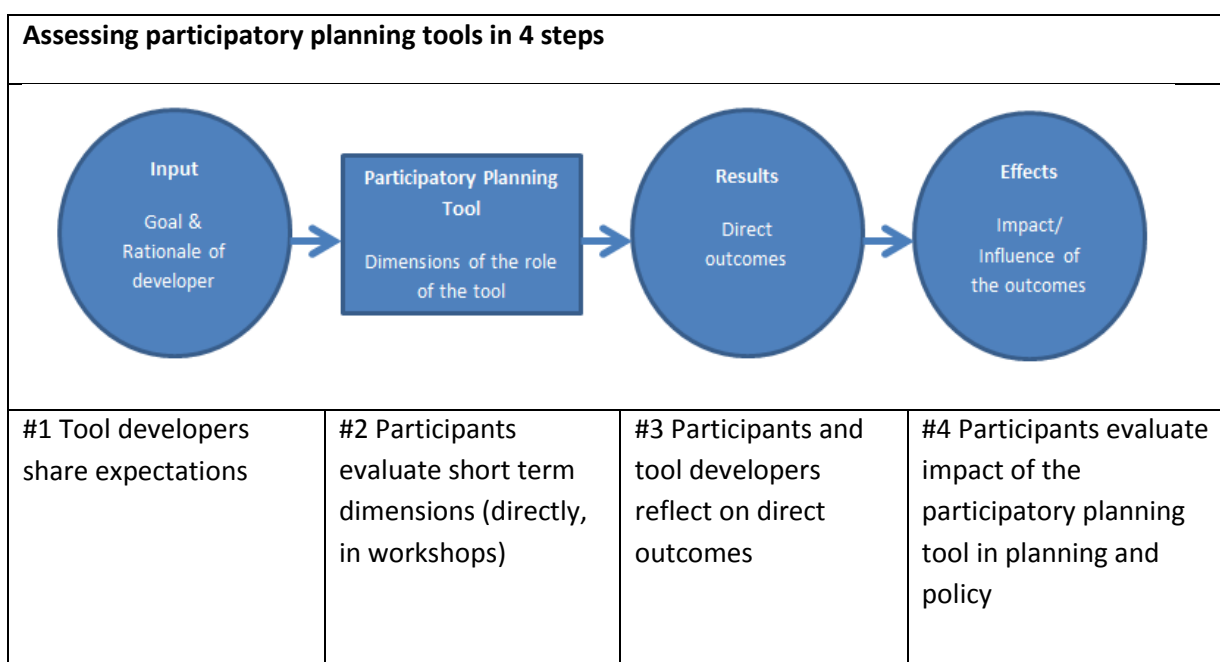
Annex (5/5) **Effects evaluation [name workshop or training course]. For example: 'Participatory planning tools for strategic delta planning and management' training course**

We kindly ask you to fill in this questionnaire about the effects of the [training course or workshop] in [location and month + year]. This questionnaire is part of an assessment framework to evaluate participatory planning tools. Keep in mind that these effects are about the impact or influence that the [training course or workshop] might have on the long term and not about the immediate results. Long term is considered 6 months to 3 years after the [training course or workshop].

Your anonymity will be guaranteed in the processing thereof. Thanks in advance for your cooperation!

The first question is about the impact and influence of the [training course or workshop].

> 1. To which effects in planning, policy and decision-making has the [training course or workshop] contributed? Please tick the boxes that you think are applicable.

☐ Coalitions(s) have been formed between organisations which were represented in the [workshop or training course].

☐ Spatial plans have been developed with ideas or parts of ideas that were generated during the [workshop or training course].

☐ Possible planning results (strategies/plans/projects) have – in your opinion- been improved due to the [training course or workshop].

☐ The quality of decisions (alternatives have been considered, trade-offs are clear and there is commitment to the outcomes of the [training course or workshop]) has improved.

☐ The capacity of people (knowledge, expertise, skills) has improved, thus contributing to higher quality participation in future participatory planning processes.

☐ A long term view is embedded in the planning policy cycles in which participants are involved.

☐ Spin-off (can be pilots, experiments, projects, etc.) has been generated due to the [training course or workshop].

☐ Individuals have been empowered.

Perhaps there are other effects from the [training course or workshop] that are relevant but not represented by the previous statements. You could explain them below.

Other:_____.

Other:_____.

Questions 2 to 6 are statements on the impact and influence of the [training course or workshop], 6 months to 3 years after it took place. The questions are related to the 6 key dimensions in the assessment framework that were also assessed in previous steps. You may rate the statements on a 1-10 scale by encircling a number (1 = disagree, 10 = agree). If a statement is unclear to you, please tick the unclear box.
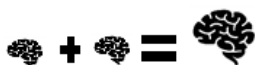
 Social Learning

												Unclear

2. Key organisations changed their perception on strategies in [the area] (partly) due to the training course/workshop.

	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

3. The [training course or workshop] has increased the collective insight of actors involved in the problem situation and possible solutions.

	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

 Power Differences

4. The [training course or workshop] contributed to a levelling of the playing field between key organisations involved and affected by problems and strategies for [the area].

	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

 Integration

5. The [training course or workshop] contributed to a more integrated approach and understanding on problems and strategies in [the area] (integration between sectors such as agriculture, industry, urban planning).

	1	2	3	4	5	6	7	8	9	10	Unclear ☐
	(disagree)									(agree)	

 Level of Agreement

		1	2	3	4	5	6	7	8	9	10	Unclear ☐

6. The training course/workshop contributed to agreement among key organisations on the main problems and strategies for [the area].

		1 (disagree)	2	3	4	5	6	7	8	9	10 (agree)	Unclear ☐

The questions 7 and 8 are additional open questions on the impact and influence of the [training course or workshop] on the long term.

7. If the training course/workshop generated some spin-off, could you please describe this below? What was the spin-off or influence? For instance: follow-up innovations or projects on which the training course/workshop had an influence.

8. Did the [training course or workshop] lead to any (change of) decision, and, if yes, how did it affect the decision?

The final questions help us to look beyond the aspects currently addressed in the questionnaire.

Are there any aspects of the impact and influence of the participatory planning tools on the long term that were missing in this questionnaire but that you believe are important to evaluate?

<div style="border:1px solid black; height:500px;"></div>

This questionnaire is part of an assessment framework to evaluate participatory planning tools. The image below shows the various steps in this assessment framework. We are grateful for your efforts to fill in this Effect-Evaluation that is linked to step 4. Should you have any questions, please do not hesitate to contact us in person or by e-mail (joerie.vanderstroom@deltares.nl, chris.seijger@deltares.nl).

Assessing participatory planning tools in 4 steps

#1 Tool developers share expectations	#2 Participants evaluate short term dimensions (directly, in workshops)	#3 Participants and tool developers reflect on direct outcomes	#4 Participants evaluate impact of the participatory planning tool in planning and policy