

# Strengthening Strategic Delta Planning in Bangladesh, Netherlands, Vietnam and beyond

## Report on Consortium meeting

Dhaka 28 February – 3 March 2017



**Participants (project members):** Malik Fida Khan, Jawad Khalil, Thamina Tamanna, Ashraful Alam, Umma Kulsum Navera, Shanoor Hassan, Nguyen Hong Quan, Andrew Wyatt, Thi Minh Hoang Vo, Gerardo van Halsema, Dorien Korbee, Wim Douven, Jaap Evers, Chris Seijger.

**Invited external speakers:** Prof. Dr. Shamsul Alam, Md. Habibur Rahman, Prof. Dr. Dilip Kumar.

**Presentations:** all presentations can be downloaded from the Strategic Delta Planning Dropbox account. [https://www.dropbox.com/sh/ilfmpt3n5ypmiho/AAAsBp8EDgpbPe68bokyo\\_joa?dl=0](https://www.dropbox.com/sh/ilfmpt3n5ypmiho/AAAsBp8EDgpbPe68bokyo_joa?dl=0)

### Schedule:

Date	Location	Main activities
Tuesday 28 February	CEGIS, Dhaka	Recap on progress made Insights of BDP: CEGIS and invited speakers
Wednesday 1 March	On route to Kuhlna	Travelling Sharing insights on TRM and polders
Thursday 2 March	Visiting polder 35/1	Visiting polder 35/1: local perspectives
Friday 3 March	CEGIS, Dhaka	Project plans

## Day 1 Introduction day in Dhaka

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Start with a round of introduction

### Recap of project set-up by Wim:

- project consists of 3 topics (actors, innovations and tools); three activities (Research, capacity development and planning) and 3 delta's (Ba, NL, VN)
- Mid-term review by NWO: positive. Recommendations that we have to accommodate.

### Reflections on BDP process by Fida:

Fida has been involved in the preparation phases of the BDP. The official project time is over, but decisions on the BDP are still to be made. The challenge that the BDP team is facing now is to make the strategic decisions, and select the projects and plans that will receive support under the BDP. This will have to happen in the coming 6 months.

### Progress of researchers



- Shahnour included preliminary results of her MDP case. Now working on the BDP case.
- Hoang focussed on her work on the MDP case.
- Dorien presented on the Haringvliet, discussions were on the Haringvliet case and the development of the MOTA tool. Important to note here is that it is a supplement to the existing MOTA surveys
- Chris presentation focussed on 1) the integration of the work of PhDs and Postdocs, to see the foreseen gaps in case studies and 2) his analysis of the MDP development. Important for his analysis is the discussion on different types of implementation. There is direct implementation of projects etc, but secondly, and maybe of more importance is the transfer of ideas and the changes in minds.
- The presentations resulted in discussions on the current focus of the researchers on the MDP. The role of 'vested interest' in setting strategic goals and in implementing them. An important lesson is that we need a shift from master plans to strategic plans.

### Reflection on the Participatory Planning Tools workshop by Jaap:

- Very successful tool workshop
- Important and appreciated was the south-south learning

- The constellation of the group resulted in a balanced discussion (Bangladeshi very outspoken & Vietnamese with extensive knowledge on case)
- Assessment framework to evaluate tools – there are differences of perceptions on goals & output between the participants and the organisers. Framework is ready to be used in second half of the project.

**\* Intermezzo; visit by Minister of Water resources Anisul Islam Mahmud**



***‘Whether we like it or not, we have to protect our land, we don’t have enough of it to let it go’***

The visit of the minister started off with a discussion of our project. He points to the ‘problem’ of the polders, very timely problems; thus very timely research project. In his opinion there is no alternative to polders. Bangladesh needs it polders. It is a question on how to best maintain the polders; with what resources and what methods (dredging, closure of rivers).

The minister doesn’t believe that 1/3 of Bangladesh will be under sea, as predicted by Climate reports. The majority of Bangladesh’ territory is above sea level. In comparing Bangladesh to the Netherlands, here a large part of the territory is below sea level, but they are managing to remain the land, why not Bangladesh?

The minister stresses a few times that there are no alternatives. They need the land. Where would all the people that now live in the polders have to go to? It is impossible to accommodate them all in Dhaka, this would boil down to enormous costs. Also; we can’t decide in Dhaka to inundate their houses, this is immoral. He acknowledges that there are questions of maintenance; sluice gates need to be redesigned. Innovations such as room for the river have been applied, but have resulted in erosion of the banks and a population boom. As a result people start living in the room that was attributed for the river. What about innovations such as floating houses? Answer; difficulties with changing practices.

The polders we established to secure food production (how to avoid water destroying production) only later the focus became increase of food production. Now, the polders are not only for agriculture, or for other means of economic aspects, such as industrialisation. They are there to accommodate people. They should be flood-free. You’ll have to understand that Bangladesh has an enormous population density, it is higher as in India. This creates problems. Secondly, there is a huge amount of water; it is the second largest water outlet in the world (only after the Amazon river). Adding to the complexity is that Bangladesh only represents 7% of the catchment area, and receives 80% of the water flow in only 2 months. The central problem is: landmass in relation to the amount of water.

Presentation on the coastal area by Umme Kulsum Navera

- The geography of Bangladesh is important. There are major differences between the coastal regions, in the storm surges, tidal movements and river flows. Each region is subject to its own natural dynamics.
- Rehabilitation of polders. Polders are very vulnerable areas, due to cyclones (as has been exemplified by Sidr and Aila). Cyclones can have enormous impacts and cause damages to mangrove forests. The damage caused by Aila and Sidr on the mangroves is expected to take 40 years to recover.
- Problems that the polders face are surface water salinity and groundwater salinity. Shrimp farming has big economic value, and is taking over whole areas and polders.
- There are 139 polders. There have been over 15 initiatives of the years that focus on polder development and coastal zone safety. These projects can help us to understand what has been done, and to extract the good elements and lessons learned.
- A recent focus of these projects are the Strategic Environmental Impact Assessments in addition to only embankment improvements.

Construction in polders by Md. Habibur Rahman

Effect of Sidr. Overtopping of polders, in 31 out of 139 polders, causes major damages. The general status of polders requires maintenance, due to 45 years of neglect and land subsidence.

The BDP as presented by Mr. Shamsul Alam (General Economic Division, Planning Commission)



- Strategic delta plan = dynamic plan, it will change every 5 years. Measures are developed with stakeholder input. Important to focus on inland water transport, instead of focussing on road and railway transport.
- The deltaplan foresees an increase in expenditure in the water sector, from 0,6-0,8% of the GDP, up to 2-2,5% of the GDP. A Delta Fund will be established, funded by the 2% national GDP. With these figures it should be noted that the GDP of Bangladesh is increasing, so the shares will increase tremendously. Funding arrangement is 80 % public money and 20% private investments. Goals is that the full amount of O&M costs is paid for by public urban water and sanitation levies.
- Problem: the non-implementation of existing plans, due to their non-holistic approach. Line ministries and ambitious (but unrealistic) finance agreements
- Institutional implementation of the BDP: instalment of a Bangladesh Delta Commission, with a Delta Act, Delta governing commission and Delta commissioner (which should have the status of a state minister). An extensive framework for implementation has been developed. This includes development results framework, with indicators, such as 'length of bank erosion'.

Discussion by group:

- Is the BDP an example of strategic delta planning, or rather of adaptive delta planning? What are the strategic choices that have been made? A: eradicate poverty and stimulate economic growth.
- Wim: How do strategies for different regions and teams are conflicting and interacting? What are the trade-offs between the strategies.
- Gerardo; from experience with the Mekong Delta plan, we have seen that it is very important to make strategic choices. What are possible scenarios for the region, and which scenario has preference? In Vietnam there was a clear choice for the "Agro-business industrialisation" which includes a diversification of agricultural production. Answer: we need to encourage a shift toward saline aquaculture development, which is not supported by local government, so up to local farmers.
- Economic perspective is key for a good problem analysis. And for the strategic plan; tell a story of where you'd like to go to. Even a fairy tale...

## Day 2: Trip to Khulna

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On the road to Khulna, with breakfast on the go. Trip with a ferry across the Padma river. During this trip, we saw construction works for the construction of a bridge that will cross the river. This bridge will replace the ferries, and will therefore improve the transportation network enormously. The bridge will be the largest bridge crossing a river in Bangladesh. It is of vital importance for the economy, but will however cause environmental impacts. As explained by Fida, it is not possible to cross the entire width of the river bed by the bridge, this is shortened by 1-2 km at either side. To allow for this, the river needs to be tamed, and thereby loses part of its natural meandering space.



Sustainable management of coastal polders by Dr. Dilip Kumar

Three changes in water management in Bangladesh over the last decades. 1) controlled flood management; 2) Flood plain and drainage; 3) riverbank and town protection. These all focus primarily on water, and neglect sediment. Furthermore, lack of participation and integration of local knowledge.

For a sustainable management of the delta, it is important to follow the 'rhythm of nature'. In this case it means that we are dealing with a prograding delta (due to the transport of sediment the delta is acquiring land). The coastal area of Bangladesh is an 'Unmature Delta'. Explanation of dynamics behind prograding delta: Sediment transported by the rivers to the sea, is for 80% transported back into the delta, due to currents in the Bay of Bengal. The construction of the polders result in a blockage of this dynamic. A solution could be TRM (Tidal River Management). TRM is a concept based on existing local practice, and reflects how the land was used prior to the construction of the polders. It focusses on sediment distribution.



Precondition: you cannot deconstruct the polders. Too many people depend for their livelihoods on these polders (the social problems of closing the polders are too big). Therefore TRM is a compromising solution. But: 'polders are not sustainable'. TRM is a solution, but requires contextualisation. There is not one practice of TRM, the exact procedure depends on the local natural dynamics. Thus, this is a solution on micro scale, not on whole polder level, but micro polders could be levelled.

What is needed for change: traditional wisdom (he used this word instead of knowledge) + experience of small holders, technical issues and active participation. It is a method that should be adapted case by case, not a general solution. Problem of land-use conflicts. Local communities do not agree. It is a social conflict, not a technical one. Local communities protest, because they have no confidence in the implementing agencies. They have always lost (land, resources) to them.

After the presentation, we had a discussion on how to integrate local knowledge in the planning processes. What structure/institutions are needed? Role of CEGIS as bridging organisation. However, Fida mentions that, although they collect the voices/insights, it is frequently lost in the scaling/levelling up in Dhaka.

Transformation boundaries of reinstalling TRM: need for compensation, difficult, because of increased population and vested interests. Matter of scale, it is not always easy to find the land owners, it occurs that compensation is not given to the right owners (conversation Shahnoor with lady near the new sluice gate in polder 35/1). Government plan: TRM in combination with dredging the canals. There is a major division between the support of changes between small holders and big holders. The latter often do not live within the polders.

Reflection on the coastal embankment project: 'they put money into water'. It is only a short term reactive approach.

What are strategies to deal with shrimp? Not on a national level. Farmers own initiative to change practices. There were transformations to shrimp farming, but currently, there are shifts back to other crops, because there is no trust in shrimp (dependency on export market) and farmers consider it better to spread risks, thus go for polyculture.

Problems of the BDP. It doesn't include spatial planning and the prime focus on water, leaving out the management of sediment.

#### Environmental Impact Assessment of the Polder 35/1 coastal embankment project by Ashraf

In 1960s centralisation of coastal protection, prior to that, no centralised policies or plans. This resulted in the construction of the polders. A problem of this process is that it was enforced on the local population, there were no consultation rounds, no participation, no single instance of listening to the experiences and knowledge of local people.

Monitoring and maintenance is key! But in the projects, there is hardly ever money allocated for M&O, only money by international donors for Development & Construct. (note by DK: same as in de BDP, as mentioned by the State Secretary on day 1)

### **Day 3: Visiting polder 35/1 and return trip to Dhaka**

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Due to time constrains the program of the day was adjusted. We started with visiting the most southern point of the polders (with views on the Sundabarns). At this point a new sluice gate was build, in combination with improved embankments.

Under guidance and translation of Fida, we engaged in a conversation with local residents. The farmers are confident that they will profit from the new sluice gate, as the old sluice gate is not working properly anymore. There is no pump, all water is managed by opening and closing the sluices. This also relates to lack of electricity in this area of the polder.

While the topic of management and operation has been pointed out on the previous days, questions were asked about provisions made. The answer was, that there is no plan on management and operation. The previous gate was management voluntary (without payments). Fida asked for a round of applause for the 70-year old gate keeper (see picture)

Perceptions on the effect of the new sluice gate during flood season, when rainfall is high and water levels in the tidal channel as well (thus limited windows of opportunity for draining during low tide). With the old sluice he managed to reduce the water level within the polder with 5 feet, he expects that the new sluice could bring a 7feet reduction, and this is sufficient for draining the logged water out of the polder. The main livelihoods in this area are agriculture and natural fish harvesting. Changes in the last 30 years: reduction of fish harvesting, and increase in agricultural production of 20-30%



Shahnoor spoke to 2 residents. The first was an older man. He told her that he was happy that the project was undertaken, as response to the damage caused by Sidr. He said others received a compensation package and relocated. His perception is that the dike will protect them, and will secure for an increased agricultural production. However, the elevated dikes will not be helpful when another 'Sidr' comes. The second respondent, a women living still living on the old dike, was still waiting for compensation, before she is able to relocate. She mentioned that a positive outcome of the paving of the dikes is the possibility to receive electricity. The lady also talked about problem of riverbank erosion (note by SH: Reflection from the water minister's talk: he emphasized on the necessity of safety measures from riverbank erosion). Both respondents say they were informed of the construction works at the time construction began. They were not involved through stakeholder consultation. Both the old men and the lady mentioned about a sharp increase in the salinity in the river. They get freshwater from the river for four months now during monsoon.



The second step of the day was at the construction site of CC blocks. These blocks are produced locally, with local workers (distance of around 20km from site). These blocks are used in the embankment projects.

Return to Dhaka, with some experiences on the way:

ferry chase.



#### Day 4: future outlook of project; work for the coming 2 years

Societal relevance by Wim and Fida. The relevance of this project for the BDP → there are possibilities for the project to help steer the BDP in the right direction.

Agricultural transformations, due to salinization and drought in the Mekong Delta by Quan.

WACC is currently involved in a large, nation-wide project. Link MOTA to adaptive pathways. Gain understanding in the transformation barriers. Here focus on water management and lack of practice. How to support; capacity building. Develop transformation pathways: for the short-, middle-, and longterm. An important element is whether farmers do agree with the problem analysis of the MDP. To answer this research question, the MOTA approach can be used.

MOTA as approach can be further developed. The proposed direction is the development of a MOTA toolbox, in which the questionnaire & its specific analysis is one of the tools, other tools could be specified focus group guidelines, interview guidelines & their analysis. Andrew points to an element that he finds is missing in relation to MOTA and other tools; the political dimension. MOTA is a tool to gain understanding in possible gaps, other tools are necessary to build consent. But the context that Andrew is sketching a gap (PP slide) is very important for explaining the use of the tools in this process. Important tool to engage high-level officials in the development of a strategic plan: Mekong Delta Forums, sponsored by the Worldbank. Regional cooperation.

Tools workshop: focus on young generation, but attached to that a high-level officials day. Sept-oct 2017.

Training and education

- Buet sees opportunities to develop a course in the MSc program. Maybe also develop something at Khulna university. Also important professional education.
- VNU: Quan sees at the moment no opportunities for a new course/module, but can change the content of some lectures.
- Cegis: is already involved in a series of professional training, will now introduce a module on 'water diplomacy' on international cooperation.
- Important for training and education is that you need the right platform (institute) for the right people. Furthermore; sharing of developed material (slides etc) between each other.
- IUCN; sees opportunities in linking up to existing initiatives.
- IHE is developing a new module 'strategic river basin and delta management'. It is a new name to an existing module, that will now be restructured. Under development.
- A new initiative at IHE is the development of an internet based program on Delta program. There will be one foundation course, complemented by a 'menu' of modules that students can choose from.

Reflections on the fieldtrip by Shahnoor and Hoang, discussing both the trip itself and relations to Vietnam. The fieldtrip sparked a lot of discussions, such as how to increase stakeholder involvement and how to include local knowledge in the plans? What are current livelihoods, why is so much land unused at the moment. The reason is that we visited the area during dry season, rice is grown on these land during the rainy season. Compared to Vietnam, were the adagium is to 'never leave land unproductive'. Farmers are not interested in bringing in saline water during the dry season, as there is not enough fresh water available in the wet season to flush out salinity. An important context variable

in the coastal area is that it is a disaster prone area; people do suffer, and have to regularly cope with this.

To change current situation it is important to focus on livelihood provision and economic perspectives in the area. However, it is clear that you have to protect, which makes it a social problem. The unspoken message of the rebuilding of the dikes is 'business as usual', and not that the whole system needs to be transformed. How to convey the message to the residents that transformations are necessary, without 'scaring the people'.

Thus, what are transformation barriers: vested interests, governance capacity at local level, uptake of local knowledge. Problem with BDP; based on secondary knowledge, no new research/analysis.

Research activities:

In the matrix of (case study) research, Chris has identified two gaps: 1) research on innovations in Bangladesh. This could be filled up by MSc students from CEGIS, Khulna, IHE working on the topic of 'transformation boundaries of TRM in Bangladesh'. A second gap is on the hourglass level in the Netherlands, here it is more difficult to have MSc work.

Special issue in the journal of environmental planning and management. We aim for 7-12 paper, consisting of papers from our project and some outside, but it will be invited contribution, and should clearly focus on strategic delta planning.

**Working** title: Strategic delta planning: launching new ideas, and their travels along people, actor coalitions, deltas and implementation timelines.

Planning:

- September 2017: deadline abstracts
- January 2018: submit to guest editors (internal)
- Jan – March 2018: cross paper analysis of guest editors
- March 2018: deadline for submission

Dissemination of research to lower implementation agencies, by studying their perceptions, ideas, goals and changes in planning.

Can we develop a training program out of this project that can be used for the Bangladesh Water Project (BWP), to be taught on a yearly basis.



## Activities 2017-2019

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The boxes discuss priority (what we can do within the project) and spin-off for different dimensions of our project, after which some more detailed actions are discussed.

### Research

#### Priorities:

- Hoang – Shahnour – Dorien – Chris conduct their case studies (by researchers)
- Cross-case / delta comparison (by Chris)
- Special issue (lead by Chris)
- input for lessons learned on SDP, curriculum.

- Joint NL case Hoang and Dorien that is connected to Veerman plan
- MSc research on transformation barriers of TRM in Bangladesh. Students could come from BUET, Khulna University, Unesco-IHE, Wageningen University and supervised by prof. Navera, prof. Dillip, CEGIS, Gerardo and others.
- Research on Mota (see separate section)
- Dorien BDP case that focuses on implementation feasibility of strategic plans in local implementation agencies. What is their capacity? (preferably in coastal zone)
- Special issue: title as proposed suffices as a working title, a catchy title that sends out our message needs to be developed/based on the results of the papers. Chris is in the lead. Everyone is willing to commit to the special issue. Cross-case comparison joint effort among researchers, first develop analyses for each delta, then look for cross-delta differences and similarities in terms of hourglass framework dynamics. Have enough articles led by southern researchers. Address the challenge of connecting research and policy, and our approach, incl. learning.

### MOTA

#### Priority

- further discuss and develop Mota, also for use at strategic planning (not only farmer level) (by Dorien, WACC; Dorien visits Vietnam in April)
- use in Ben Tre case (April) and BGD case (end 2017/early 2018?) (by Dorien)
- will feed into tool box (by Dorien)

#### Spin-off:

- can be various, e.g. use of Mota in UNESCO-IHE curriculum (by Jaap), TU Delft curriculum (by Leon) but also in tool workshop and professional trainings.

- Dorien will visit WACC in April for case study Ben Tre and to discuss Mota developments and use with WACC

- Toolbox Dorien: Mota based, questionnaires and analysis tools, guidelines
- Quan and WACC/VNU will also continue with MOTA research

### Professional training and uptake in curriculum

**Priority:**

Develop new module Strategic planning for river basins and deltas. Will be done at UNESCO-IHE but benefits from input of consortium partners (by Jaap, Wim)- Develop curriculum at BUET and VNU (to be discussed and dependant on project budget available) (by Navera, Phi, Quan)- Training workshop (SDP/participatory tool workshop) in which training material is developed and tested (by Jaap)

**Spin-off:**

- CEGIS (e.g. professional training strategic delta planning) (by Fida)
- BUET (e.g. master course Water Resources) (by Navera)
- VNU (lecture material IWRM course) (by Quan)
- UNESCO-IHE et al. Mekong delta communication and dissemination project (by Jaap, Andrew)
- IUCN (GEF project) (by Andrew)
- Niche Delta Cap (support implementation BDP) (by Jaap)
- Khulna University (to keep linking with Dillip) (by Chris, Wim)
- Bangladesh Water Partnership (by Fida)
- Explore also opportunities at Wageningen University and TU Delft (by Gerado, Leon)

- Explore opportunities for curriculum embedment (lectures / courses / trainings / case studies) in BUET, VNU, WACC.
- Participatory tools workshop part 2 will be organised in Bangladesh, with CEGIS. This could be in Dhaka, or in Khulna. The workshop will focus on young staff, and will have a similar design as the previous workshop, only with a stronger focus on MOTA. The workshop will be followed by a day for high-level planners etc. which will discuss a review of BDP by the project. Preferably we can bring in a high-level member of the Dutch Deltacommission (Fida was asking for Veerman); to be discussed with Dutch embassy.
- Course material will be shared amongst team members. We will have to look for the best platform, for now, we will use the existing Dropbox folder.

## Societal relevance

### Priorities:

- Come up with lessons learned on strategic delta planning. Insights from BDP, MDP, case studies of researchers. Acquire lessons from case studies, training workshops, focus group discussions. (by all, in part. Also BUET, CEGIS, IUCN and WACC)- Tested / reflected tools in strategic delta planning: scenarios, DENVIS, charrettes, MOTA (all involved in tool testing and workshops)  
Tested framework for assessing role tools (based on work MSc Joeri) (by Deltares?)

### Spin-off:

- Into MDP communication dissemination project (by Jaap, Andrew)  
- Delta Cap project Bangladesh (by Jaap)  
- make relevance of our work explicit in terms of Sustainable Development Goals (by all)

- Based on this visit the team will prepare a short evaluation of the BDP, this evaluation or review will be based on this trip & the experiences in Mekong (lead by Wim). This will allow Fida to communicate easier about lessons learned & will be a first step in the preparation for the high-level workshop day to be organised in Sept-Oct.

## Communication and dissemination

### Priorities

- Present our findings from case studies and lessons learned at events in the different deltas`. Be pro-active in identifying opportunities. (by all, but in particular BUET, CEGIS, IUCN, VNU/WACC).  
- Write two-pagers for professional magazines to communicate about our findings (by to be decided)  
- Spin-off into delta planning community we are involved in (by all)

## Other

- Wim will check whether the budget allows for a third tools-workshop to be organised in autumn 2018. This will provide for continuation, and offers the possibility to go 'and beyond', maybe Myanmar??
- Navera requests a document; what is the project and where are we now. To be used for communication. (poster send 7March)
- Idea lunch seminar BUET when team members visit next time