

Training of Trainers on Adaptive Delta Management

Trainers manual

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1. Introduction

1.1. Background

The Government of Bangladesh has taken important steps in the formulation of the Bangladesh Delta Plan. As a next step, it will be important to 'put the BDP2100 on the ground' and incorporate the longer term flexible planning issues in day to day implementation practice in the water sector. To this end, Bangladesh is facing a huge demand for skilled water professionals who recognize the complexity the water sector is confronted with nowadays and are able to effectively apply and transfer experiences and knowledge.

The NUFFIC-NICHE funded project DeltaCAP has recently started to support the capacity building in support of Adaptive Delta Management (ADM). The project aims at developing trainings and curricula on ADM in close cooperation between Dutch and Bangladesh partners and links to the developments of the BDP2100. The Delta Alliance, in which Bangladesh and the Netherlands are partners, recently decided to develop a professional training programme on Sustainable Delta Planning. It was decided to join forces and develop a joint Training of Trainers (ToT) programme on ADM that will support further developments in both the DeltaCAP project and the Delta Alliance.

This ToT activity takes a practical approach for capacity development, aiming at developing a training on ADM in close cooperation with the proposed trainers. This will be done by providing both content and an environment to work as a team to be able to meet the demands of the proposed trainers. The focus of the activity will be on capacity building for longer term planning and implementation, and improving the capabilities for integrated assessments and analyses, thus widening the scope for solutions and development of sustainable solutions in the delta.

1.1.1. DeltaCAP

The DeltaCAP project is part of the INNOCAP NICHE initiative to contribute to the further formulation and implementation of the Bangladesh Delta Plan in a tailor made way (e.g. creating a sustainable delta management training institution in Bangladesh) through learning (using existing expertise), creativity (development of practise based academic curriculum as a vehicle to develop capacity for implementation of the Bangladesh Delta Plan), using best practices (involving organizations with experience in implementation of NICHE, Bangladesh Delta Plan, etc), cutting red tape (making a transparent and accessible platform for sharing), and working from aid to trade (involving private sector companies in the process). The objective of the project is to strengthen education and training capacities for water sector professionals required to putting the Bangladesh Delta Plan (BDP2100) on the ground (c.q. operationalizes the proposed decentralisation of water management issues and regionalisation of water related policies proposed in the Delta Plan). DeltaCAP will create and enhance these capacities through an interactive, flexible and practical oriented training and learning approach involving both education and training providers and end-users using information services and concrete test beds and design workshops to foster interaction and wider uptake. Establishment of a training centre on ADM is foreseen to provide support to practical oriented centres.

1.1.2. Delta Alliance

Delta Alliance is an international knowledge-driven network organization with the mission of improving the resilience of the world's deltas. With increasing pressure from population growth, industrialization and a changing climate, it is more important than ever that these valuable and vulnerable locations increase their resilience to changing conditions.

The Delta Alliance has launched an initiative in 2016 to foster and coordinate the development and maintenance of a joint professional training program on Sustainable Delta Planning and Management. The scope, objectives, relevance and strategy to develop this program have been jointly defined with the Delta Alliance partners. The partners are keen to run the first course in Bangladesh in the first half of 2017. After this test run it is the intention to further adapt, up-scale and run the program for Delta Alliance Wings. It is important to note here that the development and execution of the program will be a joined effort of Delta Alliance Wing partners.

1.2. Learning objectives

The overall learning objective of this training is to develop capacity for Adaptive Delta Management: longer term planning and integrated assessment. The training should lead to an increased operational understanding of decision makers and planners about longer term planning and integrated assessment, including:

- Improved practical decision making in view of socio-economic and environmental developments including climate change
- Improved understanding of BDP2100 and SDG in relation to delta management

The second learning objective is to enable the participants to develop a training on the subject for their own organisation and implement this training in order to improve the understanding of ADM within the various water management organisations.

After the training, participants should be able to:

- Translate sustainability criteria and uncertainty principles into operational delta management;
- Understand how long-term socio-economic and environmental developments influence decision-making at the short, medium and long term, and how present-day decision-making influences long term developments;
- Understand how non-stationarity and uncertainty can be used in decision-making including investment decisions;
- Understand the role of scenarios and models in long term adaptive planning;
- Integrate long term planning with policy preparation and decision-making;
- Understand how integrated assessments are needed to support long term planning;
- Initiate and coordinate integrated assessments; and
- Initiate and coordinate studies into development of measures that account for long term integrated planning.

Specifically for this training, participants should be able to initiate and coordinate a training programme within their own organisation.

1.3. Design of the training

The training should result in an overall ADM plan for the case study area as developed by groups of participants. Several concepts on ADM will be presented, a field visit to the case study area will be made and through practical work, to enable participants to familiarize themselves with the case study area and develop a long term plan. As different groups will develop a plan, the different plans will be discussed and compared to learn from the different assumptions and values that were attached to the plans.

The training should also result in individual plans by the participants to implement a training programme within their respective organisations. To this end, in the programme time has been allocated to reflect on the past day and to incorporate the training input into a training plan. Meanwhile possible improvements and omissions are identified as well as a strategy to implement improvements and fill possible gaps.

1.4. General programme

	Saturday 16 September	Sunday 17 September	Monday 18 September	Tuesday 19 September
Morning	<ul style="list-style-type: none"> • Introduction of the masterclass • Introduction BDP • Long term planning and sustainable water management • The concept of ADM and sustainability 		<ul style="list-style-type: none"> • How to develop integrated assessments • Developing solutions • The concept of mainstreaming • Group work on the case study – identification of potential solutions and preparation of ADM plan 	<ul style="list-style-type: none"> • Presentation of ADM plan • How to find structural financial coverage – group work
Afternoon	<ul style="list-style-type: none"> • The use of scenarios • Group work on the use of scenarios • Group work on developing the training 		<ul style="list-style-type: none"> • Group work on ADM plan (continued) • Group work on developing the training 	<ul style="list-style-type: none"> • Presentations on developing the training – participants report on their plans for training • Evaluation and follow-up
				<ul style="list-style-type: none"> • Joint dinner

2. Day 1: Long term planning and sustainable water management

2.1. Programme

Time	Topic	Presenter/facilitator	Contents
09:00	Registration		
09:30	Welcome and introduction of participants	Dr. Jos Timmerman	
09:40	Introduction to the Training of Trainers	Dr. Jos Timmerman	General welcome and introduction to the training Overall programme and objectives of the training
10:05	Introduction to BDP2100	Dr. Mizanur Rahman	Overview of contents of the BDP2100 and the implementation process
10:45	Coffee/tea		
11:00	The concept of Adaptive Delta Management and sustainability	Prof. Dr. Muhammad Shah Alam Khan	
11:45	Long term planning and sustainable water management	Dr. Jos Timmerman	
12:30	Lunch and prayer break		
13:30	The use of scenarios	Prof. Dr. Umme Navera	
14:30	Group work on the use of scenarios	Dr. Jos Timmerman / Prof. Dr. Umme Navera	
15:45	Coffee/tea		
16:00	Developing a tailor made training	Dr. Jaap Evers	Participants will reflect on the day and will start developing ideas on the training they will develop for their own organisation
17:00	Closing of the day	Dr. Jos Timmerman	Logistics and assignment for field visit

2.2. Learning objectives

2.2.1. Introduction to Training of Trainers

- Participants are familiarized with the goals and objectives of the ToT
- Participants are familiarized with the overall programme
- Climate change is underpinned
- Concepts like adaptation, delta management, transboundary cooperation, climate change, long-term development, disaster risk reduction, uncertainty and non-stationarity are introduced
- Explanation of the development of the ADM plan
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2.2.2. Introduction to BDP2100

- The goals and objectives of the BDP2100 are introduced
- The overall strategy of the BDP2100 is explained
- The status of the BDP2100 is explained
- The envisaged position of the BDP2100 in relation to the national development strategy is explained
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2.2.3. Long term planning and sustainable water management

- Introduction to long term planning and sustainable water management
- Participants understand the concept of sustainable water management
- Participants understand the role of sustainable water management in socio-economic development
- Participants understand the need for long term planning in view of sustainability and disaster risk prevention
- Participants understand the concepts of tipping points and adaptation pathways
- Participants understand how long term planning can be achieved
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2.2.4. The concept of Adaptive Delta Management and sustainability

- Introduction to Adaptive Delta Management
- Participants understand the concept of ADM
- Participants understand why the delta as a conceptual entity is suitable for planning and management of interlinked activities and interests
- Participants understand why ADM is intrinsically linked to sustainable water management
- Participants understand how ADM can contribute to sustainability
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2.2.5. The use of scenarios

- Introduction to scenarios
- Participants understand the concept scenarios
- Participants understand how scenarios can act as a tool to limit the decision space
- Participants are able to develop simple scenarios
- Participants are able to apply scenarios in a case situation
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2.2.6. Developing a tailor made training

After this session the participants are able to:

- Describe the concept of aligned teaching
- Design the learning objectives of developing a tailor-made training
- Describe the target groups of training (qualifications)
- Design learning and teaching activities aligned to the learning objectives

2.3. Further reading

- Marchand, M., T. Bucx, C. van de Guchte, A. Makaske, W.F. van Driel (2013). Enabling Delta life – What makes managing land and water in deltas different? Discussion paper. Delta Alliance Report number 4. Delta Alliance International and Global Water Partnership, Delft-Wageningen, the Netherlands. <http://edepot.wur.nl/330186>
- Serinaldi F. and C.G. Kilsby, 2014. Stationarity is undead: Uncertainty dominates the distribution of extremes. *Advances in Water Resources* 77: 17-36
- Timmerman, J.G. and F. Bernardini, 2008. Adapting to climate change in transboundary water management. Perspective document for World Water Forum 5, Istanbul, Turkey. http://www.worldwatercouncil.org/fileadmin/www/Library/Publications_and_reports/Climate_Change/PersPap_06_Transboundary_Water_Management.pdf

- Timmerman, J.G., J. Matthews, S. Koepfel, D. Valensuela, N. Vlaanderen, 2017. Improving governance in transboundary cooperation in water and climate change adaptation. Water policy, in press.
- UNECE, 2009. Guidance on Water and Adaptation to Climate Change. United Nations, Geneva, Switzerland. ISBN 9789211170108.
http://www.unece.org/fileadmin/DAM/env/water/publications/documents/Guidance_water_climate.pdf
- UNECE, 2015. Policy Guidance Note on the Benefits of Transboundary Water Cooperation: Identification, Assessment and Communication. United Nations, Geneva, Switzerland. ECE/MP.WAT/47.
<http://www.unece.org/index.php?id=41340>
- UNECE, 2015. Water and Climate Change Adaptation in Transboundary Basins: Lessons Learned and Good Practices. ECE/MP.WAT/45. United Nations, Geneva, Switzerland.
http://www.unece.org/fileadmin/DAM/env/water/publications/WAT_Good_practices/ece.mp.wat.45_low_res.pdf
- WHO, 2010. Guidance on Water Supply and Sanitation in Extreme Weather Events. L. Sinisi and R. Aertgeerts (Eds.) WHO/UNECE, Geneva, Switzerland.
<http://www.euro.who.int/en/publications/abstracts/guidance-on-water-supply-and-sanitation-in-extreme-weather-events-2012>

3. Day 2: Field visit to Rupganj

3.1. Programme

Time	Topic	Presenter/facilitator
08:30	Travel to Rupganj	
10:00	Field visit	Prof. Dr. Umme Navera / Prof. Dr. Muhammad Shah Alam Khan
12:30	Lunch and prayer break	
13:30	Field visit (continued)	Prof. Dr. Umme Navera / Prof. Dr. Muhammad Shah Alam Khan
16:00	Travel to Dhaka	

3.2. Learning objectives

- Participants are familiarized with Rupganj North Water Conservancy project
- Participants are familiarized with the problematic of the study area in terms of water management issues, irrigation issues, general agriculture issues and the engineering activities
- Participants are familiarized with climate change projections as well as socio-economic projections
- Participants are familiarized with potential risks/hotspots in the study area
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3.3. Further reading

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4. Day 3: Integrated assessments

4.1. Programme

Time	Topic	Presenter/facilitator	Contents
09:00	Wrap up of the previous day	Dr. Jos Timmerman	Short recapitulation of the previous day Questions from the group Introduction to the day
09:30	Experiences with macro planning	Mr. Saiful Alam	
10:00	Experiences with strategic planning	Mr. Malik Fida Khan	
10:30	Coffee/tea		
10:45	How to develop integrated assessments	Dr. Saskia Werners	What are integrated assessments Developing solutions The concept of mainstreaming
11:00	Group work on the case study – integrated assessment	Mr. Saiful Alam, Mr. Malik Fida Khan, Dr. Saskia Werners	Identification of potential solutions and preparation of ADM plan
12:30	Lunch and prayer break		
13:30	Group work on the case study – integrated assessment (continued)	Mr. Saiful Alam, Mr. Malik Fida Khan, Dr. Saskia Werners	
15:45	Coffee/tea		
16:00	Presentations ADM plan	Dr. Jos Timmerman	
17.30	Closing of the day	Dr. Jos Timmerman	

4.2. Learning objectives

4.2.1. Experiences with macro planning

- Introduction to macro planning
- Participants are familiarized with the relationship between BDP2100 and macro planning
- Participants are familiarized with perspectives, barriers, opportunities and limitations in macro planning in Bangladesh
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4.2.2. Experiences with strategic planning

- Introduction to strategic planning
- Participants are familiarized with the relationship between BDP2100 and strategic planning
- Participants are familiarized with perspectives, barriers, opportunities and limitations in strategic planning in Bangladesh
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4.2.3. How to develop integrated assessments

- Introduction to integrated assessments
- Participants are knowledgeable of the concept of integrated assessments
- Participants are able to develop an integrated assessment
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4.2.4. Development of the ADM plan

- Participants are able to make an integrated and balanced assessment of the various interests in the study area
- Participants are able to develop a long term vision on the climate and socio-economic developments in relation to the strategic goals in the study area
- Participants are able to develop a strategic plan for the case study area
- Participants will learn from the various solutions that each group has developed
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4.3. Further reading

- UNECE 2011. Second Assessment of Transboundary Rivers, Lakes and Groundwaters. <https://www.unece.org/index.php?id=26343>
- UNECE 2015. Reconciling resource uses in transboundary basins: assessment of the water-food-energy-ecosystems nexus. <https://www.unece.org/index.php?id=41427>
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5. Day 4: Coming to solutions

5.1. Programme

Time	Topic	Presenter/facilitator	Contents
09:00	Wrap up of the previous day	Dr. Jos Timmerman	Short recapitulation of the previous day Questions from the group Introduction to the day
09:30	Structural financial coverage	Dr. Jaap Evers	What does a training cost and who is going to pay for it? Participants design a financial planning for a training workshop
10:30	Coffee/tea		
10:45	Developing a ToT	Dr. Jaap Evers	Participants report on their plans for training their own organisation
11:30	Follow-up of the training	Dr. Jos Timmerman	
12.30	Evaluation and follow-up	Dr. Jos Timmerman	
13.30	Lunch and prayer break		
19:00	Closing Dinner at Araaz Restaurant, Rapa Plaza, 1 Road No 16, Old No 27, Dhaka 1207, Bangladesh		

5.2. Learning objectives

5.2.1. Structural financial coverage

- Participants are able to develop a financial planning (venue, accommodation, salaries, teaching materials)
- Participants are able to identify financial resources (internal and external) for capacity development
- Participants are able to develop a proposal for the development of a training
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5.3. Further reading