

**BF-DELTAS expert consultations on delta vulnerability
indicator selection
Ganges-Brahmaputra-Meghna Delta**

3-4 September 2014, Dhaka, Bangladesh

Context

The BF-DELTA project is funded by an international collaboration of funding agencies, the Belmont Forum, to advance and unify our scientific understanding of deltas as coupled socio-ecological systems and to develop a science-based integrative modeling framework that can be used to assess delta vulnerability and guide sustainable management and policy decisions at the regional and local scales. The main underlying assumption of DELTAS is that although each delta is unique, integrative frameworks that capture the socio-ecological working of these systems can be developed and encapsulated in decision support tools which can be adopted locally, in collaboration with regional experts and stakeholders, for sustainable delta management. The DELTAS modeling framework will be applied to three diverse, globally significant delta systems - the Ganges-Brahmaputra-Meghna (GBM), the Mekong, and the Amazon. These deltas will receive a customized integrative modeling framework which will be implemented, in collaboration with regional experts, to assess delta vulnerability to current and future conditions, as well as guide sustainable management and policy. Figure 1 illustrates the structure of the project, the work packages and the model deltas.

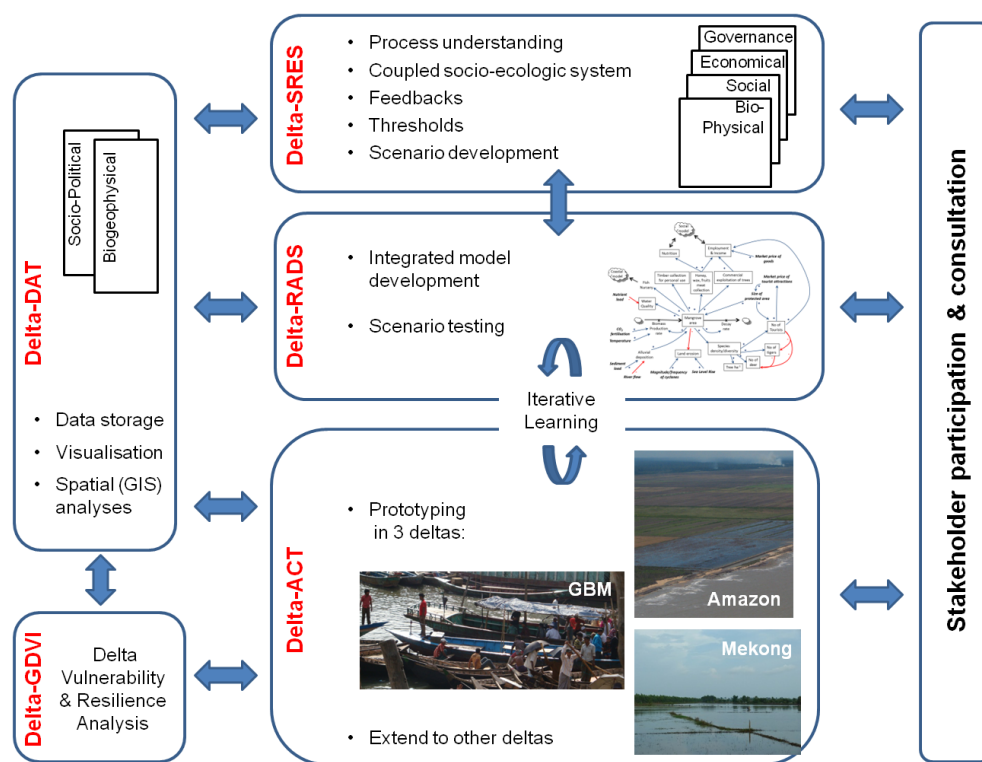


Figure 1. Structure of the DELTAS project (<http://www.delta.umn.edu/>)

Global Delta Vulnerability Indices (GDVI) – one component of BF-DELTA

To develop Global Delta Vulnerability Indices (GDVI) as one of the elements of the project, we aims to 1) advance our understanding of the spatial variability of vulnerability on the sub-delta level, 2) develop a unified framework for assessing resilience and vulnerability that will be adapted locally, 3) define indicators that are quantifiable at the sub-delta scale and transferable in different delta contexts capable to capture the spatial variability of vulnerability, 4) apply a flexible indicator development process that combines scientific and local stakeholder-based approaches, 5) conduct an assessment in the three demonstration deltas at the sub-delta scale and finally 6) draw lessons for application in other delta environments.

To be of particular use to policy-makers, vulnerability metrics need to be developed based on indicators that are quantifiable at the sub-regional scale and transferable in different delta contexts. Policy factors which are critical in shaping future development of various delta environments, but also differ among various governance regimes, are often ignored in assessing delta vulnerability and need to be incorporated in vulnerability metrics. Emphasis also needs to be placed on capturing the interface between ecosystems and social systems through understanding and quantifying delta ecosystem services and how these can be altered by external (e.g., environmental hazards) and internal factors (e.g., induced by policy decisions).

Local stakeholder consultations in all three model deltas

Based on a review of vulnerability frameworks and indicators, current and future risks, their probability and urgency, as well as current adaptive capacities, a list of indicators is currently co-developed with local stakeholders in all three delta regions. During facilitated discussions, invited participants (representatives of sectoral agencies, scientists, and nongovernmental organizations) discuss current pressures and impacts as well current and future vulnerabilities of the social-ecological system in place. Based on the outcome of the discussion participants develop a set of indicators suggested to be used in delta vulnerability assessments. Indicators are developed for sub-delta assessments. Indicators are also discussed with regard of their spatial and temporal relevance as well as data sources and availability.

The outcome of the local consultations will be a weighted and generalized set of indicators for delta vulnerability assessments and improved access to data needed for the characterization of these indicators. Furthermore, information and views from participating stakeholders will be gathered and feed into the side event “Science-to-Action: Aligning science with stakeholder and community needs in the Mekong Delta system” the Rotterdam International Conference 2014, Deltas in Times of Climate Change II (24-26 September 2014).

Local stakeholder consultation in the Ganges-Brahmaputra-Meghna Delta, 3-4 September 2014, Dhaka, Bangladesh

Organizers

The consultation is co-organized by

- 1) the United Nations University, Institute for Environment and Human Security (UNU-EHS) – the project partner responsible for the project component Global Delta Vulnerability Index (GDVI) represented by Dr. Fabrice Renaud, Dr. Zita Sebesvari, and
- 2) International Centre for Climate Change and Development (ICCCAD) of Independent University, Bangladesh (IUB) represented by Prof. Saleemul Huq.

Agenda of the meeting

The agenda is designed to support the participative character of the consultation. Thus, the organizers provide input presentations only, followed by group work and plenary discussions. The meeting is structured around the following agenda items:

- 1) “Mapping” the hazard landscape: delta sub-regions and relevant hazards
- 2) Development of Impact Diagrams for selected hazards on local and national scale
- 3) BF-DELTA framework for vulnerability assessment
- 4) Selection of indicators to characterize the vulnerability of systems with respect to the identified hazards

DELTA local consultation on indicator development for a Global Delta Vulnerability Index (GDVI), Dhaka, Bangladesh

(draft agenda)

Workshop language: English

Wednesday - 3 September 2014

08:00 Registration & Welcome coffee

08.30 Welcome address by Prof. Saleemul Huq (ICCCAD)

08.40 DELTA project and the planned work for the development of a “Global Delta Vulnerability Index” (Dr. Fabrice Renaud)

Format: 15 min presentation

08.55 Local consultation: Structure, aim and expected outcomes (Dr. Zita Sebesvari)

Format: 15 min presentation

09.10 Introduction of participants

Format: Tour de table, background, work experience, interest in vulnerability assessments

09:40 Coffee break & group formation

Build discussion groups based on delta sub-regions

10:00 “Mapping” the hazard landscape: delta sub-regions and relevant hazards

Format: group discussion, using delta maps to highlight hazards, categorize hazards according to the following: 1) Types of existing hazards, 2) spatial and temporal attributes of the identified hazards, 3) expected future trends, 4) present and future (anticipated) severity of the impacts, including identification of sector/area/social group are the impacts felt most, 5) How far is the hazard human-made, what are the key drivers?

11:00 Joint discussion about the delta hazard landscape developed in groups

Format: plenary, short presentations by each group, focusing for each of the identified hazards on aspects 1 to 5 outlined above; Select jointly 2 hazards per group to elaborate further in the next session

11:30 Development of Impact Diagrams for selected hazards on local and national scale

*Format: 10 minutes presentation of expected outcomes by Dr Zita Sebesvari,
Followed by group work*

12:30 Group photo

12:40 Lunch break

13:30 Presentation of Impact Diagrams and joint discussion

Format: plenary, short presentation by each group of the impact maps on local and national scale, joint discussion

14:15 Input presentation: DELTAS framework for vulnerability assessment with examples (Dr Fabrice Renaud)

Format: 20 min presentation

14:35 Categorize the impacts identified according to vulnerability categories, revisit the impact diagrams for missing aspects

Format: group work

15:15 Coffee break

15:35 Discuss the elements of the jointly developed framework

Format: plenary moderated by Dr Fabrice Renaud

16:00 Input presentation: Indicators – rational, selection process and evaluation (Dr Zita Sebesvari)

Format: 20 min presentation with examples

16:20 Initial discussion about indicators using one of the hazards as example

Group work: 2 groups working on the same hazards in parallel. Note: possible indicators (will be further discussed on the second day)

17:30 End of first day

Thursday – 4 September 2014

08.30 Recap of Day 1, rational Day 2 (Dr Fabrice Renaud)

08:50 Selection of indicators to characterize the vulnerability of systems with respect to the identified hazards

Format: group work. Using the broad vulnerability categories of the DELTAS model, develop lists of key indicators that should be considered for multi-hazard vulnerability assessment

09:50 Short reflection on indicator list, comparison between groups

Groups report back to the plenary

10:15 Coffee break

10:45 Scale and data availability of the indicators

Format: group work. Each group identifies the scale of applicability of the indicators (e.g. national level, local level) and the availability of data for each of the indicators (e.g. available nationally, available in international databases etc.)

11:40 Discussion of indicators and priority ranking

Plenary moderated by Dr Zita Sebesvari. Brief presentations from the groups. Priority ranking of the indicators to identify the ones that are the most relevant, for which data is available, and that can be readily understandable by stakeholders

12:30 Lunch break

13:30 Final discussion on indicators

Reach a consensus on the selected indicators moderated by Dr Fabrice Renaud

14:30 Reflection on the outcome of the consultation in the Mekong Delta

15:00 Coffee break / registration for the OPEN SESSION (with additional participants)

16:00 Welcome address by Prof. Saleemul Huq

16:10 Main outcomes of the workshop presented by representatives of the working groups

17:00 Synthesis and closure by Dr Fabrice Renaud

17:20 Reception

Workshop venue:

ASIA PACIFIC HOTEL

House#2, Road#2, Block-K, Baridhara
Dhaka-1212
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