Learning Deltas Asia Initiative (LDAI)

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Deltas in a Changing Climate: Key Features

- Deltas – low lying coastal areas
  - fertile, food baskets
  - often strongly urbanized
  - rich ecosystems
  - often in transboundary river basins

- Challenges
  vulnerable to extreme weather events, including flooding from 3 sources (rain, river and sea)
  - salt intrusion
  - soil subsidence
  - erosion/sediment starvation

- Aggravated by
  - climate change, incl. sea level rise
  - upstream developments
  - transboundary water management
Deltas and Coastal Cities in Asia

Coastal cities in Asia and percentage of national urban population in low elevation coastal zone

Climate-related Disasters – Deltas as hotspots

<table>
<thead>
<tr>
<th>Region</th>
<th>Area</th>
<th>Major Cities</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia</td>
<td>Coastal areas of PRC, Deltaic areas of Yellow, Yangtze, and Pearl rivers, Southern Honshu, Qinghai-Tibetan Plateau</td>
<td>Guangzhou, Nagoya, Osaka, Shanghai, Seoul, Tianjin, Taipei City</td>
</tr>
<tr>
<td>South Asia</td>
<td>Deltaic areas of Ganges-Brahmaputra, Mahanadi, Godavari, Krishna, and Indus rivers, Nepal’s Himalayan region, Most of Bangladesh, Southern Pakistan</td>
<td>Chennai, Dhaka, Kolkata, Mumbai, Karachi</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>Deltaic areas of Mekong, Red, and Irrawaddy rivers</td>
<td>Bangkok, Ho Chi Minh City, Jakarta, Manila, Singapore</td>
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</tbody>
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Climate-related Disasters – Top 10 Countries

Table 1: The Long-Term Climate Risk Index (CRI): the 10 countries most affected from 1994 to 2013 (annual averages)

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<tr>
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<tbody>
<tr>
<td>1 (1) Honduras</td>
<td>10.33</td>
<td>309.70</td>
<td>4.60</td>
<td>813.56</td>
<td>3.30</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td>2 (2) Myanmar</td>
<td>14.00</td>
<td>7137.40</td>
<td>14.80</td>
<td>1256.20</td>
<td>0.87</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>3 (3) Haiti</td>
<td>16.17</td>
<td>307.80</td>
<td>3.41</td>
<td>261.41</td>
<td>1.86</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>4 (4) Nicaragua</td>
<td>16.67</td>
<td>160.15</td>
<td>2.98</td>
<td>301.75</td>
<td>1.71</td>
<td>49</td>
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<tr>
<td>5 (5) Philippines</td>
<td>19.50</td>
<td>933.85</td>
<td>1.13</td>
<td>2786.28</td>
<td>0.74</td>
<td>328</td>
<td></td>
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<tr>
<td>6 (6) Bangladesh</td>
<td>20.83</td>
<td>749.10</td>
<td>0.54</td>
<td>3128.80</td>
<td>1.20</td>
<td>228</td>
<td></td>
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<tr>
<td>7 (6) Vietnam</td>
<td>23.50</td>
<td>391.70</td>
<td>0.48</td>
<td>2918.12</td>
<td>1.01</td>
<td>216</td>
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<tr>
<td>8 (9) Dominican Republic</td>
<td>31.00</td>
<td>210.45</td>
<td>2.38</td>
<td>274.06</td>
<td>0.37</td>
<td>54</td>
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<tr>
<td>9 (10) Guatemala</td>
<td>31.17</td>
<td>83.20</td>
<td>0.68</td>
<td>477.79</td>
<td>0.62</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>10 (12) Pakistan</td>
<td>31.50</td>
<td>456.95</td>
<td>0.31</td>
<td>3968.92</td>
<td>0.77</td>
<td>141</td>
<td></td>
</tr>
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</table>

The Learning Deltas Initiative: A Brief Chronology

- 2014: “Enabling Delta Life” Initiative, a global project drafted with support of Delta Alliance
- Dec. 2015: Regional Workshop on Flood Management, Guangzhou, China
- May 2016: HLP on Water Security and SDGs, Yangon, Myanmar (delta focus)
- July 2016: Early discussion on “Learning Deltas” at Singapore Water Week
- Sept. 2016: Meeting with IFIs at SWWW and planning of Manila Workshop
Learning Deltas Asia Initiative:
Principal Objective

The principal objective of the LDAI
To accompany urbanizing deltas in better connecting three processes that often unfold in relative isolation, and in learning from one another in so doing:

- Enabling IWRM planning and implementation of ADM
- Engaging broader sectorial integrated and inclusive societal development processes that guide socio-economic resilience
- Supporting the planning and implementation of investment projects through innovative learning and knowledge processes building commitment and capacities

→ Need to follow an integrated, holistic and inclusive approach!

Learning Deltas Asia Initiative:
Outcome & Ultimate Beneficiaries

Outcome of LDAI
- an enhanced capacity of engaged stakeholders and institutions in policies and political efforts to enable higher levels of impact and sustainability while allowing for scaling up of resilience of urban deltas and assisting in climate change adaptation

Ultimate Beneficiaries of LDAI
- the local communities in the deltas and relevant DRR communities, RBOs, NGOs, civil societies, private sector, etc. will be involved
Learning Deltas Asia Initiative: Expected results

The LDAI, as a thorough knowledge exchange mechanism between key Asian deltas would:

- Increase the understanding of challenges faced by communities/populations living in Asian deltas
- Foster cooperation to develop joint solutions for increased water security and climate resilience in Asian deltas
- Strengthen the capabilities of local institutions to enhance targeted outreach, impact and sustainability of MDB/Climate Fund co-financed projects and to improve the quality of project pipeline proposals
- Eventually lead to strengthened resilience of populations living in coastal/deltaic areas in Asia

Learning Deltas Asia Initiative: How to do it...

- Bring key players together in the deltas:
  - IWRM planners (often water ministries)
  - Planning and economic ministries
  - Finance and other sector ministries
  - Knowledge institutes, NGO’s, private sector
  - Multilateral development banks and bilateral donors
- Learn of the successes, failures and lessons learnt in delta management and development
- Promote exchanges of the lessons between deltas
- Focus on south-south exchange and cooperation
- Taking into account the SDGs, specifically IWRM in a trans-boundary context
Learning Deltas Asia Initiative: With whom to partner

- The Delta countries:
  Key players to be brought together by GWP’s Country Water Partnerships (CWPs) or Delta Alliance (DA) Wings (in many countries CWP=DA?)

- The Delta Coalition:
  High level governmental cooperation between delta countries
  At this moment 12, of which 8 in Asia, growing

- The IFIs (ADB and WB):
  Supporting the process and bringing in some finance

Learning Deltas Asia Initiative: Organizational set-up

- Focus on deltas in Asia
- Core to be established in one of the countries
  – e.g. Bangladesh
  – in a professional institute of the Country Water Partnership
  – external financially supported (GWP, bilateral donor?)
  – to be considered as the ‘Engine’ of the Learning Deltas initiative

- Projects to be developed
  – in and between delta countries
  – that fits in on-going operational projects of ADB and WB
  – to be financed by those projects

- South-south orientation and cooperation
  ... and with external support (e.g. by Delta Alliance, Procasur)
Learning Deltas Asia Initiative: Proposed Organizational Set-up

LDAI’s MAIN CHARACTERISTICS

METHODOLOGY

1. LDAI supports the expansion and adaptation of successful policies, programmes, projects and formal knowledge, so the countries can leverage resources and partners to deliver larger results in a sustainable way.

2. South South Cooperation (SSC) and South South and Triangular Cooperation (SSTC) are at the core of the LDAI growth and sustainability strategy and will also explore complementary venues to the North-South technical assistance and funding model by engaging with governments and International Financial Institutions (IFIs) investing in the countries.
LDAI’s MAIN CHARACTERISTICS

METHODOLOGY

- The LDAI use tailor made learning tools and promote experienced learning. Through these tools, the knowledge from the practice will be capitalized and partners will gain direct access to field-tested, innovative solutions and develop the capacities to sustain learning and change in time:

1. **Network development**, by acknowledging and bringing together multiple stakeholders through face-to-face activities;
2. **Strengthening of national organizations**, by equipping them with advance knowledge management and knowledge sharing skills;
3. **Documentation and dissemination** of ADM best practices and innovation.

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LDAI’s MAIN CHARACTERISTICS

- **PHASED APPROACH**

  **Short term (February to December 2017)**

  - Inception and conception of BSC initiative with increasing participation of ADS-related institutions.
  - Initial Scoping Phase of a first knowledge exchange between major AG and Bangladesh ADM stakeholders.
  - Initial peer learning circle in Bangladesh, including participation design, cofinanced implementation and peer review follow up.

  **Mid term**

  - Organize a number of exchange and learning events between several countries.
  - Expand network to Bangladesh and other levels/management.
  - Strengthen policy dialogue and positioning of ADM in the countries.
  - Enable/empower and Bangladesh for organizing peer to peer learning.
  - Partnering with promising projects (WLA, LSAF, FAO, etc.) to roll out of  ADM innovations and best practices in Myanmar and Bangladesh.

  **Long term**

  - ADM mainstreamed in public policies and programmes in various regions.
  - Enhanced cooperation (GEC-GECE) between AG and ADM Managers.
  - CSME/WCA/AMRO: country specific linkages
  - DW/COs/Associations/ members/partners and stakeholders delinked and strengthened
  - Learning (BDAAS) as a global and open initiative, anchored locally.
### Potential Target Deltaic Areas in Asia

<table>
<thead>
<tr>
<th>COUNTRIES</th>
<th>DELTAIC AREAS</th>
<th>MAIN CITIES</th>
<th>RELEVANT ISSUES</th>
</tr>
</thead>
</table>
| Bangladesh | Ganges – Brahmaputra – Meghna Delta | Mongla, Chittagong | - Floods/droughts  
- Saltwater intrusion  
- Land subsidence  
- Erosion/sediment starvation  
- Infrastructure on soft soils  
- Ecosystem conservation |
| Cambodia | Tonlé Sap, Mekong Delta (transboundary), Bassac River | Phnom Penh | |
| China | Bohai Sea, Yangtze River Delta, Zhujiang Delta | Tianjin, Shanghai, Guangzhou | |
| India | Calcutta, Chennai, Mumbai | | |
| Indonesia | Mahakam Delta | Samarinda, Jakarta | |
| Pakistan | Indus River Delta | Karachi | |
| Philippines | Pasig River Delta | Manila | |
| Myanmar | Ayeyarwady Delta | Yangon, Pathein | |
| Singapore | Singapore River | Singapore | |
| Thailand | Chao Phraya River Delta | Bangkok | |
| Vietnam | Mekong Delta (transboundary), Red River Delta | Ho Chi Minh, Hanoi | |

### Starting to Push the Reel: Learning Deltas Asia Initiative (LDAI)

- **Selection of 5 Asian Delta Countries**
  - Bangladesh, Myanmar, Vietnam, Cambodia, China

- **Objectives of LDAI**
  - Enable IWRM planning and implementation of Adaptive Delta Management;
  - Engage broader sectoral integration and inclusive societal development processes that guide socio-economic resilience; and
  - Support the planning and implementation of investment projects through innovative learning and knowledge processes building commitment and capacities

- **Companion Countries**
  - Bangladesh and Myanmar
  - Vietnam and Cambodia
  - China
The Pilot Phase

1. The Scoping exercise between Myanmar and Bangladesh.

In February 2017 the pilot phase began with a scoping exercise between Bangladesh and Myanmar. The exercise main objectives are:

i. Building a joint Learning Agenda on Adaptive Delta Management between Bangladesh and Myanmar

ii. Selecting two Learning Territories, one in Myanmar and another in Bangladesh where to pilot Adaptive Delta Management best practices and innovations

2. The Learning Route in Bangladesh.

As a result of the scoping exercise a Learning Route will be designed. The Learning Route is a peer to peer in the field training on ADM best practices in Bangladesh, customized to Myanmar learning priorities. The training will target practitioners from government, civil society, private sector and academia institutions working on ADM, selected under criteria of converge work in a same territory.

Overall Description of the Mission to Bangladesh

- Between the 23rd and 28th February the mission was carried out as planned and professionally led by the IWMBD and the BWP
- It considered lectures, Q&A and field visit on nine learning areas

i. Bangladesh Delta Plan (BDP 2100) by GED

ii. Climate Change Modelling and Coastal Resilience by IWMBD

iii. Community level flood management, by CEGIS

iv. Flood forecasting system, by IWMBD

v. Ecosystem services for poverty alleviation by BUET

vi. Climate Change and Water Governance, by BCAS

vii. Land reclamation by BWDB

viii. Tidal River Management by IWMBD

ix. Mangroves conservation

- The field visit focused on Land Reclamation by BWDB.

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
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<tbody>
<tr>
<td>1</td>
<td>Dr Zaw Lwin Tun</td>
<td>Director</td>
<td>Design Branch, Irrigation and Water Utilization Management Department, Ministry of Agriculture, Livestock and Irrigation, Republic of the Union of Myanmar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Representative of Myanmar Water Partnership Wing Coordinator, Myanmar Delta Alliance Wing</td>
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<tr>
<td>2</td>
<td>Mr Hla Moe</td>
<td>Deputy Director</td>
<td>Directorate of Water Resources and Improvement of River Systems, Ministry of Transport and Communication, Republic of the Union of Myanmar</td>
</tr>
<tr>
<td>3</td>
<td>Mr Aye Myint</td>
<td>Senior Water Resources Engineer</td>
<td>National Engineering and Planning Services Co. Ltd (NEPS)</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Director (Retired), Irrigation Department, Ministry of Agricultural and Irrigation</td>
</tr>
<tr>
<td>4</td>
<td>Mr Kyaw Nyain</td>
<td>Executive Committee member</td>
<td>Executive Committee, Forest Resource Environment Development and conservation Association (FREDA)</td>
</tr>
</tbody>
</table>
THE PILOT PHASE

MAIN OUTCOMES OF THE MISSION TO BANGLADESH

- Joint Learning Agenda for Myanmar and Bangladesh. The pilot will focus on three ADM priority learning areas for Bangladesh and Myanmar:
  I. Polders management
  II. Tidal River Management
  III. Integrated Water Resource Management

Bangladesh Learning Territory

1. Coastal Area
2. Barind Tract Area

Map of the coastal zone of Bangladesh
Locations of Barind area
THE PILOT PHASE

MAIN OUTCOMES OF THE MISSION TO BANGLADESH

- It was agreed to organize a Learning Route on the late period of the Monsoon, most probably after the 15th of September.

- The training would last approximately 7 to 10 training days and place special emphasis on learning directly from the public and private stakeholders of the experiences.

- The Myanmar delegation will be guided in the collaborative design of one or more Improvement Plan(s) for the adaptation and adoption of best practices and innovations to their intervention contexts.

- The financial support needs to be ensured.

THE PILOT PHASE (BANGLADESH MISSION TO MYANMAR)

OVERALL DESCRIPTION OF THE MISSION TO MYANMAR

- Between the 1st to 5th June according to discussions that had taken in the consultation meeting of Myanmar delegation mission to Bangladesh

- The second LDA consultation meeting between Bangladesh Water Partnership (BWP), Institute of Water Modelling (IWM) and Myanmar Water Partnership (MmWP) representatives to define initial priorities and a timeline of learning menu options

- The meeting was co-organized by GWPO, MmWP and GWP-SA

- It considered presentations, Q&A and field visit on eight learning areas

  1. Introduction to Myanmar Water Partnership, Delta Alliance (Myanmar), Delta Coalition (Myanmar), & IWUMD by SC member of GWP-SEA SC for MmWP
  2. Disaster Risks in Ayeyarwady Delta by Director, Ayeyarwady Region, IWUMD
  3. Introduction to DWIR, Improvement of River System in Ayeyarwady Delta by Deputy Director, DWIR
  4. Introduction to FD, Governmental Strategy on Mangrove Forest Management and Conservation in Ayeyarwady Delta by Assistant Director, FD
  5. Introduction to FREDA, Mangrove Reforestation Activities in Ayeyarwady Delta, NGO Context by Executive Committee Member, FREDA
  6. Integrated Ayeyarwady Delta Strategy, Plan, Progress and Future by Deputy Team Leader, IADS Team, NEPS Co. Ltd.
  7. Integrated Water System Development of PanHlaing River Rehabilitation Project by Director, IWUMD
  8. Pan Hlaing River Integrated Development Plan by Team Leader, Water Business Line, Royal HaskoningDHV, Myanmar

- The field visit focused on Polders Management Integrated Water Resources Management and Mangrove Management
THE PILOT PHASE

MAIN OUTCOMES OF THE MISSION TO MYANMAR

Myanmar Learning Area

1. Polders Management

Location Map of Polders and Embankments in Ayeyarwady Delta

2. Tidal River Management

Mezall Sluice Gate  Paddy Cultivation  Drainage Channel  Fishing and Aquaculture

Location Map of Nyaung Done Polder controlled by Tidal River Management
**Main Outcomes of the Mission to Myanmar**

### Myanmar Learning Area

#### 3. Integrated Water Resources Management

- **Nyaung Done Town river bank protection works**
- **Improvement of river system**
- **Bank protection at Bo Myat Tun Bridge**
- **Mangrove Forest Education Center**

**Main Outcomes of the Mission to Myanmar**

- It is achieved that **concrete confirmation of agreement for selection of learning areas**, i.e., polders management, tidal river management and IWRM implementation, by both parties.
- Based on this agreement, **one learning route will be prepared for selected learning areas** that will suitable for common knowledge background of the learning participants.
- **Mangrove management** will be considered as another learning area and learning route for that will be prepared separately in the following period.
- It is discussed that **numbers of learning participants** for first learning route will be reduced as appropriate considering financial support constraint and only competent, enthusiastic, qualified knowledge and experienced holders will be selected as learning participants.
- After completion of the learning in Bangladesh, knowledge and experiences getting from the training will be applied in the actual field works in Myanmar by learning participants and if possible Bangladesh’s learning champions will also be invited to Myanmar for guidance to apply said knowledge and experiences in real Myanmar situation.
Final Remarks

- The LDAI is an initiative of GWP, set-up in consultation with the Delta Coalition, a typical means of multi-stakeholder process-based implementation, is a new way to explore learning together, which is found interesting by all parties involved.
- The LDAI assumes that participants will be funded by themselves or their organizations on an individual basis, which is so far not (yet) the case.
- From Myanmar side, field based learning, rather than theoretical learning, is preferred.

Thank you for your attention

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