

Learning Deltas Asia Initiative (LDAI)

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Learning Deltas Asia 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**
- Oct. 2016 : **Learning Delta Asia Initiative**, Manila Workshop



Potential Target Deltaic Areas in Asia

COUNTRIES	DELTAIC AREAS	MAIN CITIES	RELEVANT ISSUES
Bangladesh	Ganges – Brahmaputra – Meghna Delta	Mongla, Chittagong	<ul style="list-style-type: none"> • 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, Patheingyi	
Singapore	Singapore River	Singapore	
Thailand	Chao Phraya River Delta	Bangkok	
Vietnam	Mekong Delta (transboundary), Red River Delta	Ho Chi Minh, Hanoi	

Learning Deltas Asia Initiative (LDAI): Principal Objective

The principal objective of the LDAI

The LDA objective is to build up an **effective SSC learning and innovation Initiative** that accompanies **rural and urbanizing deltas** in better connecting three processes that often unfold in relative isolation:

- Enbaling **IWRM** planning and implementation of **Adaptive Delta Management**
 - 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'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.**



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 (CWP)** 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**

Delta Alliance deltas and countries



The Delta Coalition aims to improve and protect lives in urbanizing deltas. The coalition currently comprises 12 countries:



Delta Coalition Members

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



THE PILOT PHASE

MAIN OUTCOMES OF THE MISSION TO BANGLADESH IN FEBRUARY 2017

➤ **Building a 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**

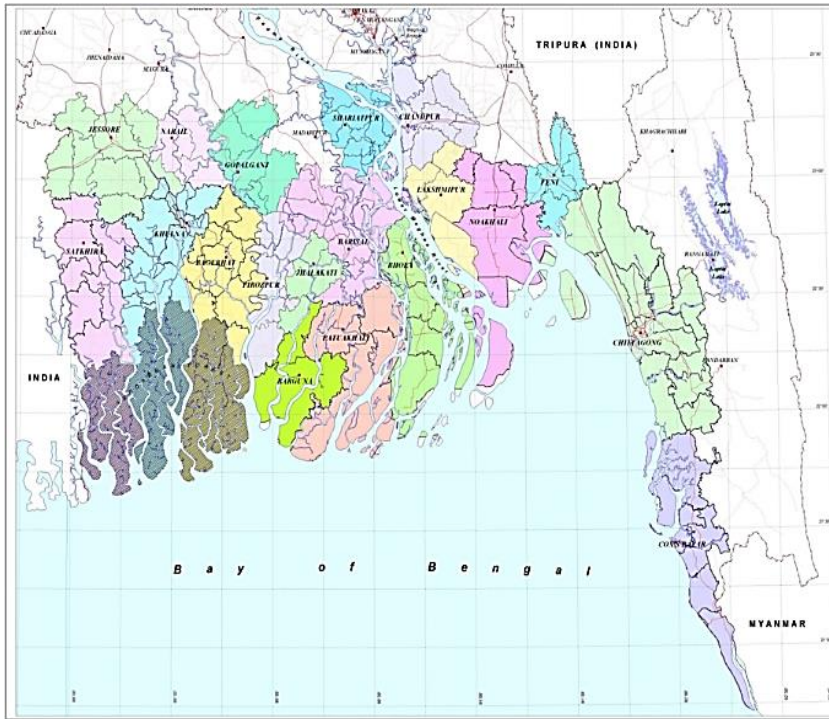


THE PILOT PHASE

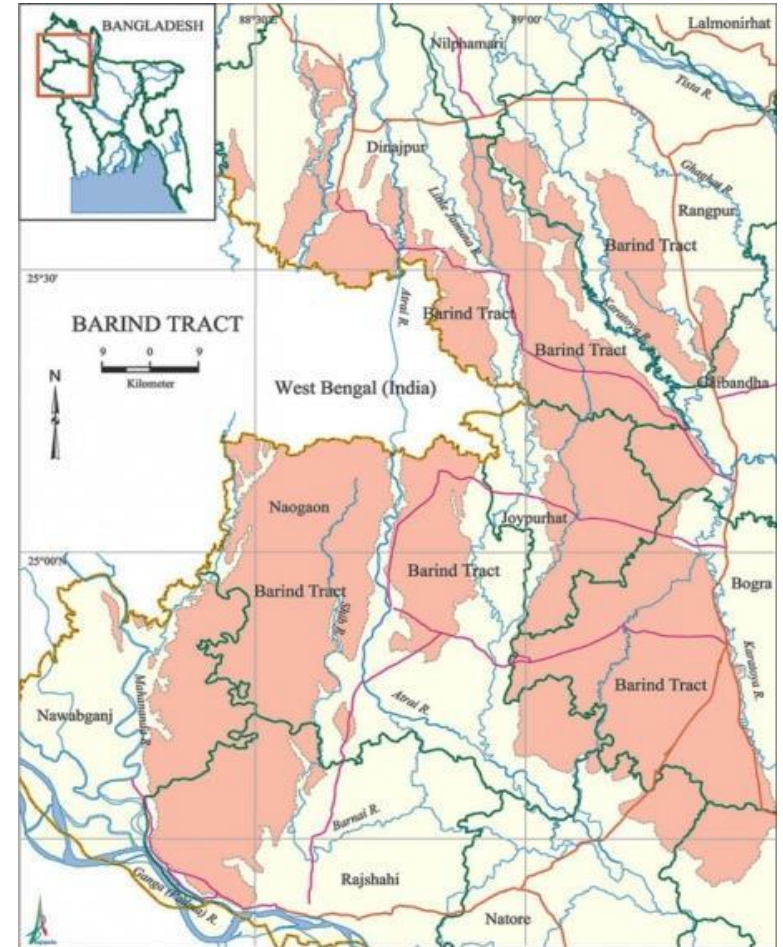
MAIN OUTCOMES OF THE MISSION TO BANGLADESH IN FEBRUARY 2017

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 MYANMAR IN JUNE 2017

- ❖ Most of the deltas parts are relatively undeveloped but at the same time near the urban areas are developing rapidly
- ❖ New approaches will have to be in line with the framework proposed by the Sustainable Development Goals together with IWRM concept and implementation of Adaptive Delta Management (ADM)
- ❖ In this early stage Global Water Partnership Organisation (GWPO) provided a platform for Myanmar and Bangladesh to promote the exchange of experience and knowledge on development of deltas and filling the gaps by initiating the Learning Delta Asia Initiative (LDAI)



THE PILOT PHASE

MAIN OUTCOMES OF THE MISSION TO MYANMAR IN JUNE 2017

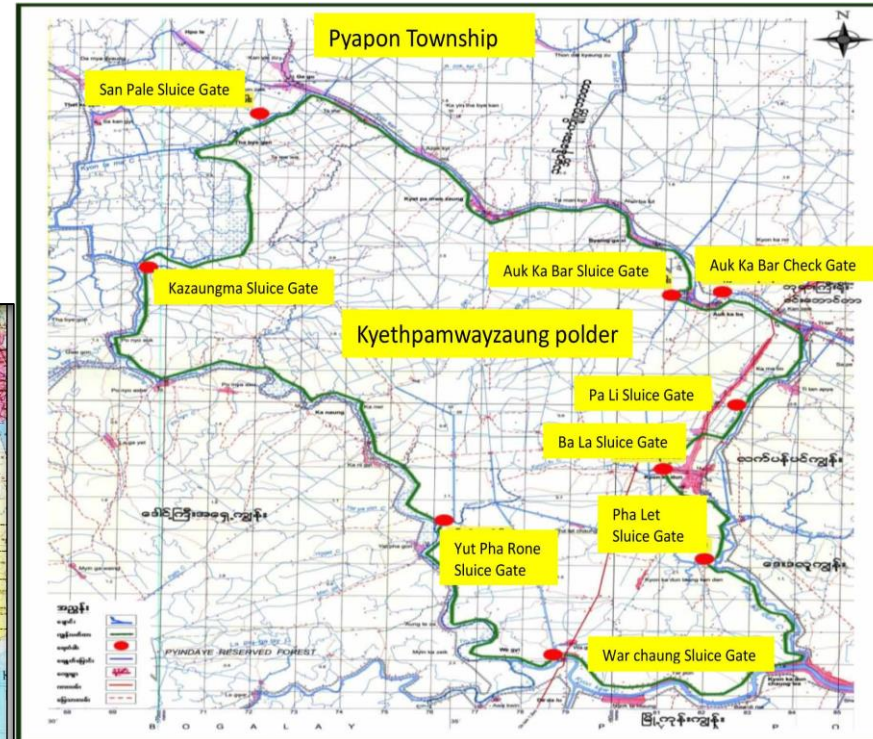
Myanmar Learning Territory

Delta Area

1. Polders Area



*Location Map of Polders and Embankments in
Ayeyarwady Delta*



*Locations of Kyet hpa mway zaung
polder area*

THE PILOT PHASE

MAIN OUTCOMES OF THE MISSION TO MYANMAR IN JUNE 2017

Myanmar Learning Territory

2. Tidal River Management



Mezali Sluice Gate



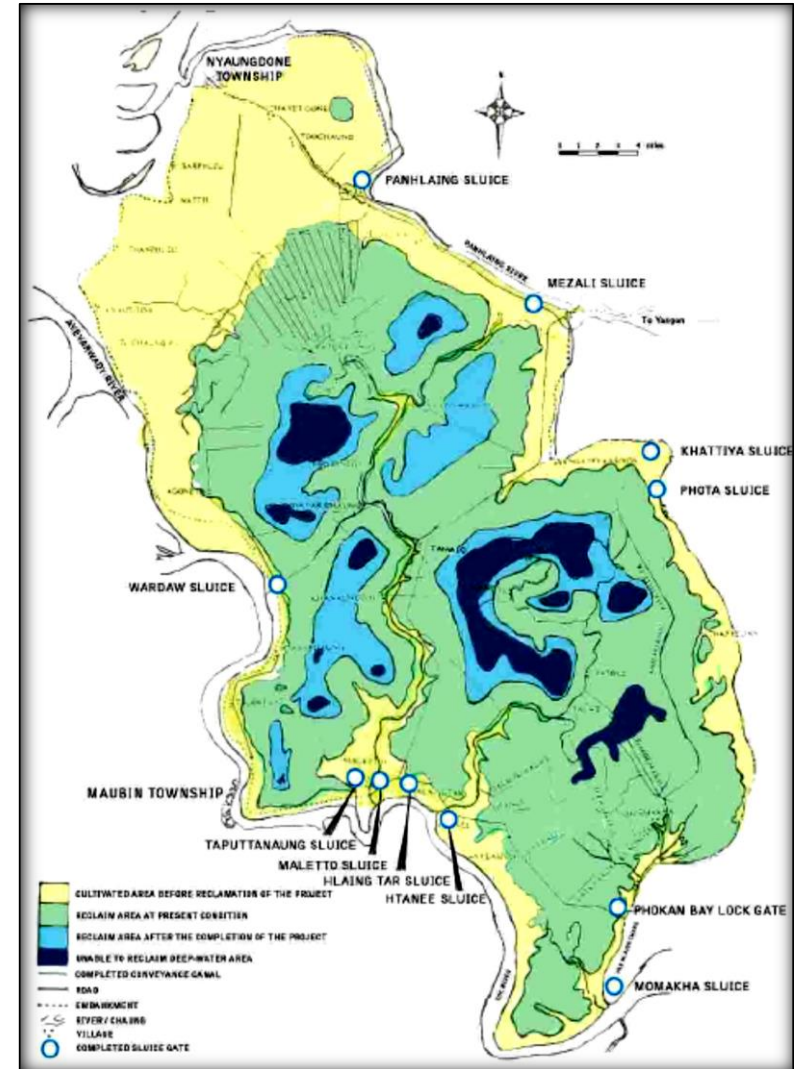
Paddy Cultivation



Drainage Channel



Fishing and Aquaculture



Location Map of Nyaung Done Polder controlled by Tidal River Management

THE PILOT PHASE

MAIN OUTCOMES OF THE MISSION TO MYANMAR

Myanmar Learning Territory

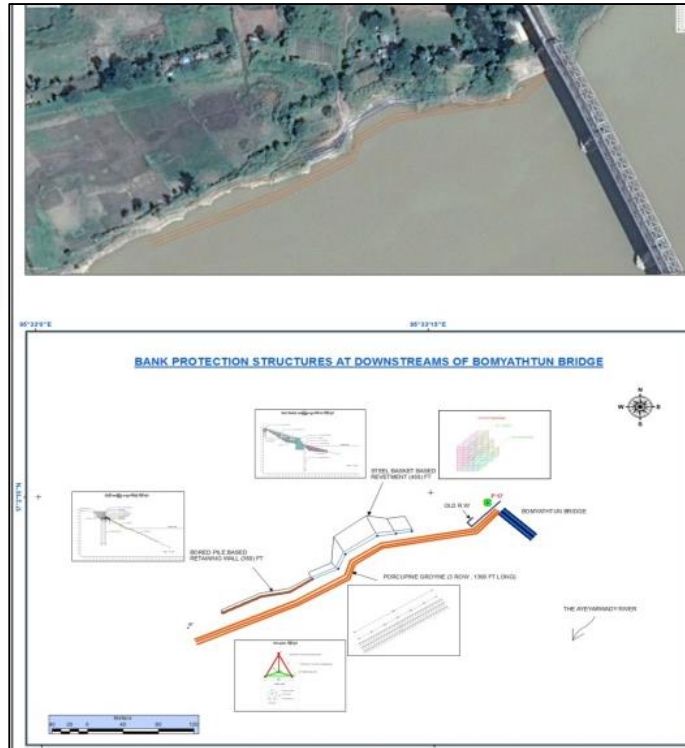
3. Integrated Water Resources Management



Nyaung Done Town river bank protection works



Improvement of river system

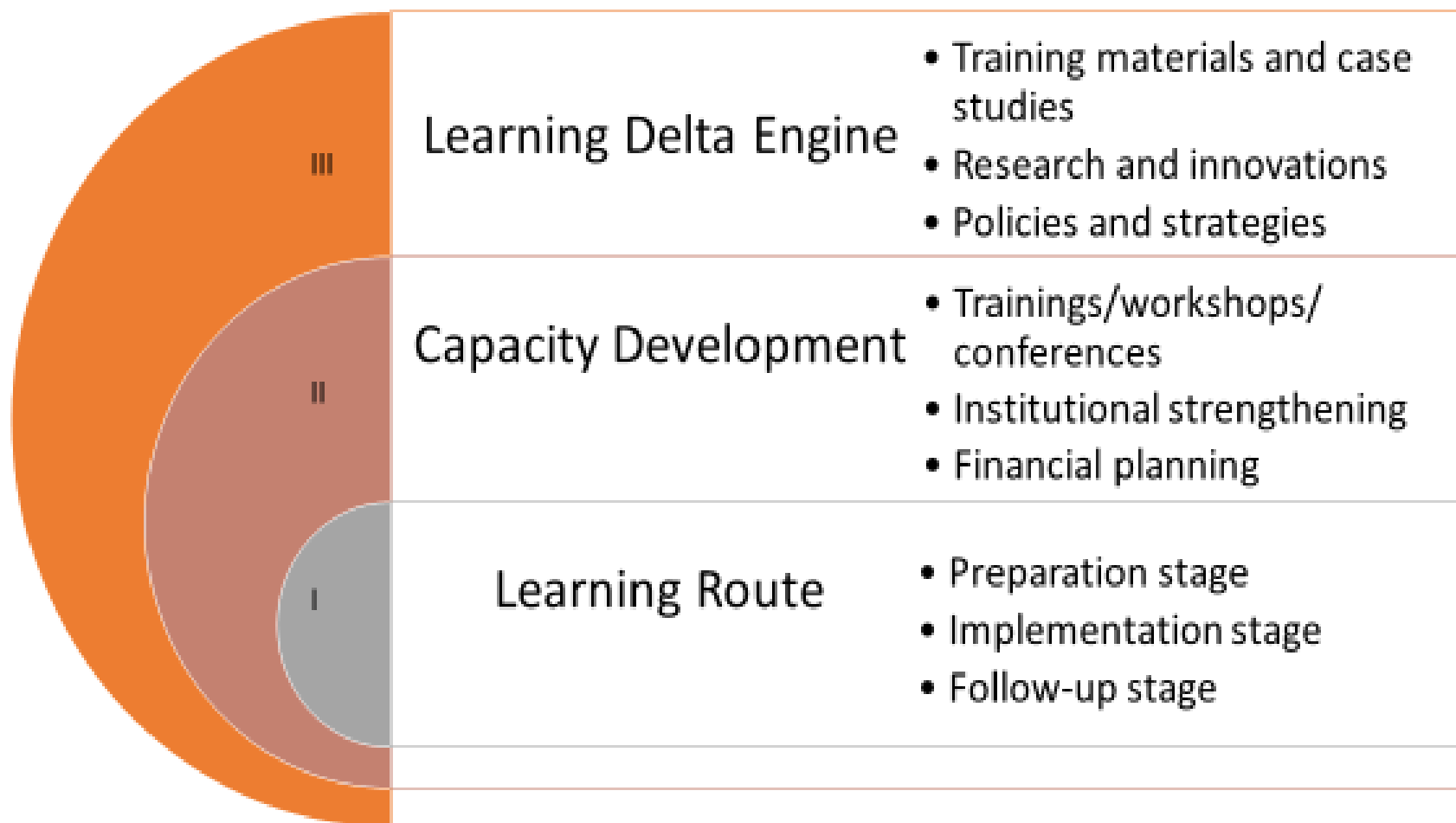


Bank protection at
Bo Myat Tun Bridge



Mangrove Forest
Education Centre

THREE STEPS IN LDAI PHASE 2



Way Forward

LDAI - Phase 2 inception meeting

- LEARNING DELTA ASIA INITIATIVE - PHASE 2 INCEPTION WORKSHOP held in Yangon, Myanmar in (6th to 7th) December
- Setting-up the LDAI project level steering committee, declaration of LDAI learning agenda in line with national planning of Deltaic countries, and enhance relevance and stakeholder cooperation for LDAI.
- ✚ Learning route implementation in Bangladesh and Myanmar
- ✚ Learning Materials development under 5 learning priorities
- ✚ Delivery of training programme, experts workshop
- ✚ Establishment of Learning Delta Engine



Final Remarks

- ❖ The LDAI 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



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...

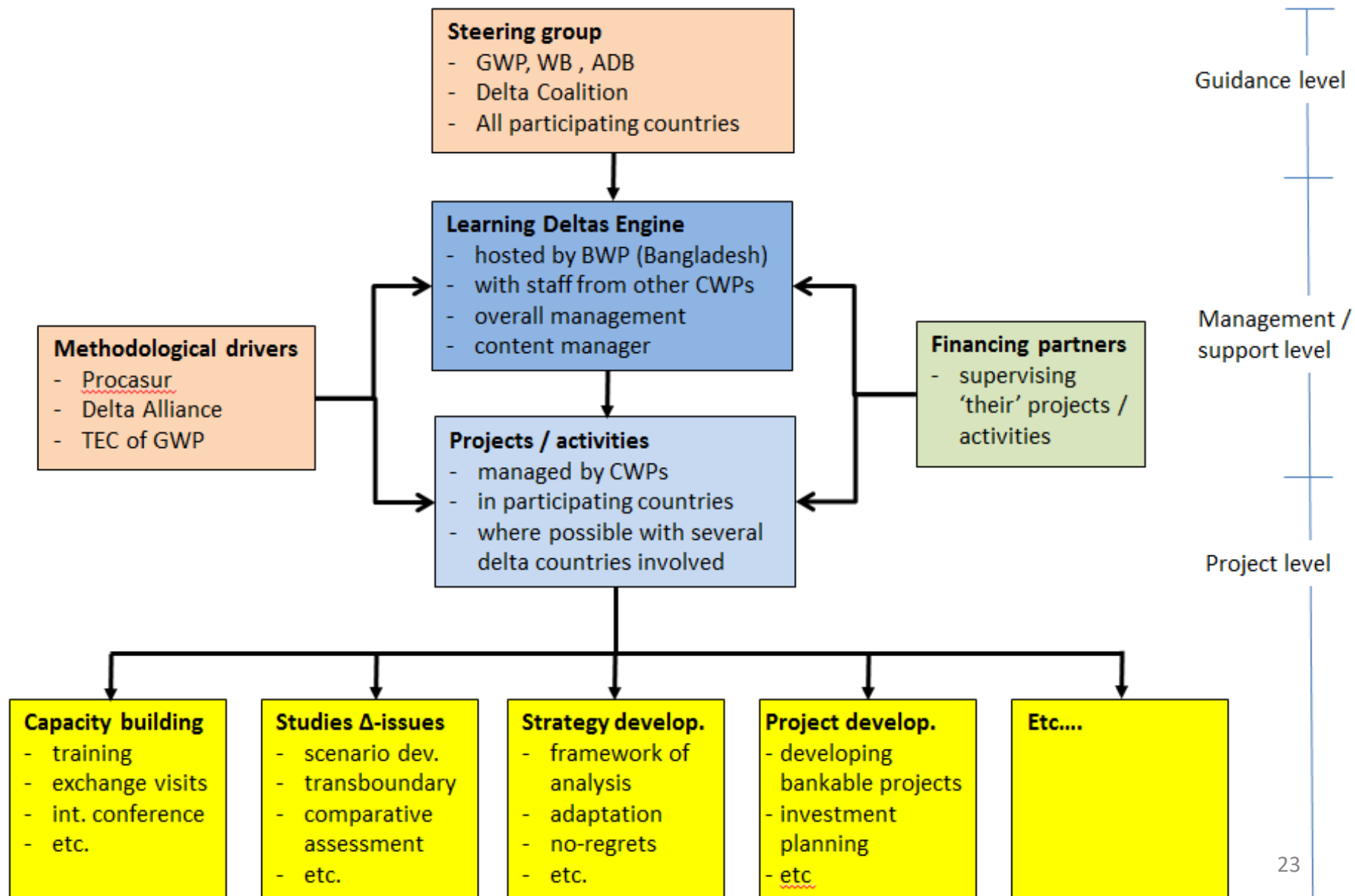
- **Bring key players together** in the deltas:
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Learning Deltas Asia Initiative: Organizational set-up

- **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



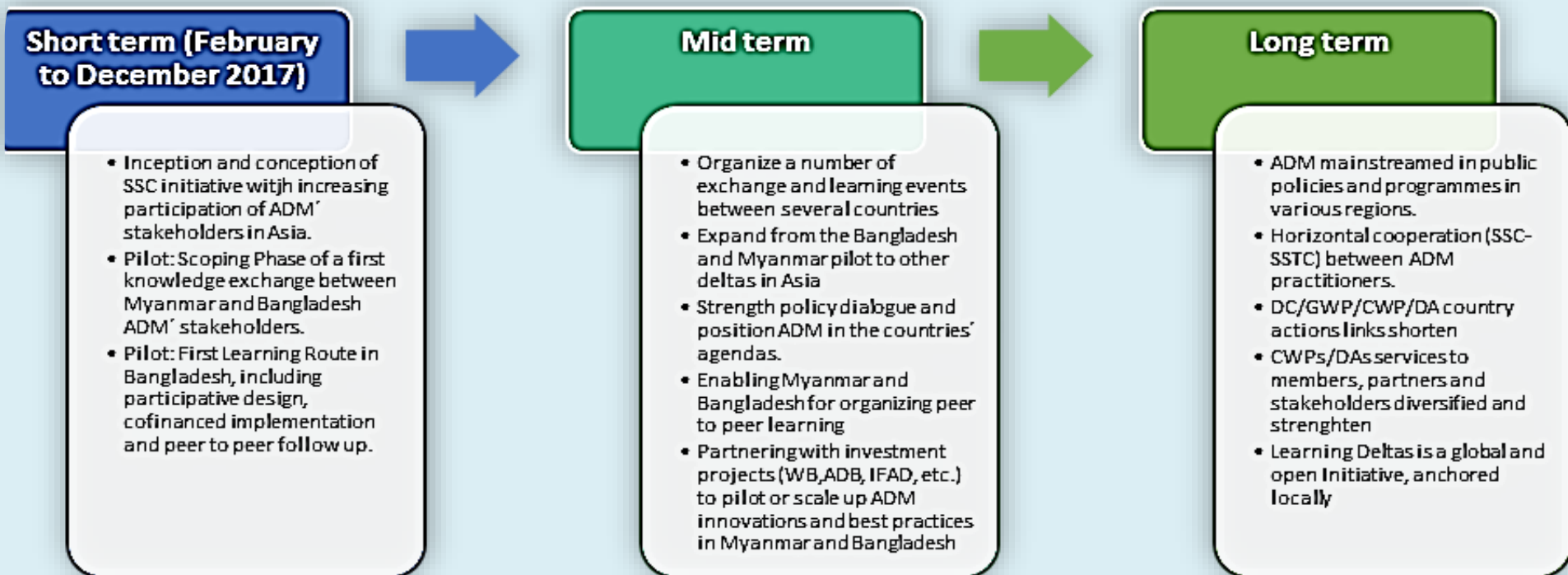
METHODOLOGY

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

• PHASED APPROACH



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.

THE PILOT PHASE (MYANMAR MISSION TO BANGLADESH)

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 BWDP.

N O	Name	Position	Organization
1	Dr Zaw Lwin Tun	Director	Design Branch, Irrigation and Water Utilization Management Department, Ministry of Agriculture, Livestock and Irrigation, Republic of the Union of Myanmar
		Representative of Myanmar Water Partnership Wing Coordinator, Myanmar Delta Alliance Wing	
2	Mr Hla Moe	Deputy Director	Directorate of Water Resources and Improvement of River Systems, Ministry of Transport and Communication, Republic of the Union of Myanmar
3	Mr Aye Myint	Senior Water Resources Engineer	National Engineering and Planning Services Co. Ltd (NEPS)
		Director (Retired), Irrigation Department, Ministry of Agricultural and Irrigation	
4	Mr Kyaw Nyein	Executive Committee member	Executive Committee, Forest Resource Environment Development and conservation Association (FREDA)

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 LDAI 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

N o	Name	Position	Organization
1	Prof. Dr Mohammad Monowar Hossain	Executive Director	Institute of Water Modelling
2	Ms. Ismat Ara Pervin	Associate Specialist	Water Resources Planning Division, Institute of Water Modelling
3	Mr. K L Induruwage	Regional Coordinator	GWP South Asia Regional Office C/O International Water Management Institute
4	Mr. Ariel Halpern	Vice President	PROCASUR Corporation, Procasur Asia

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

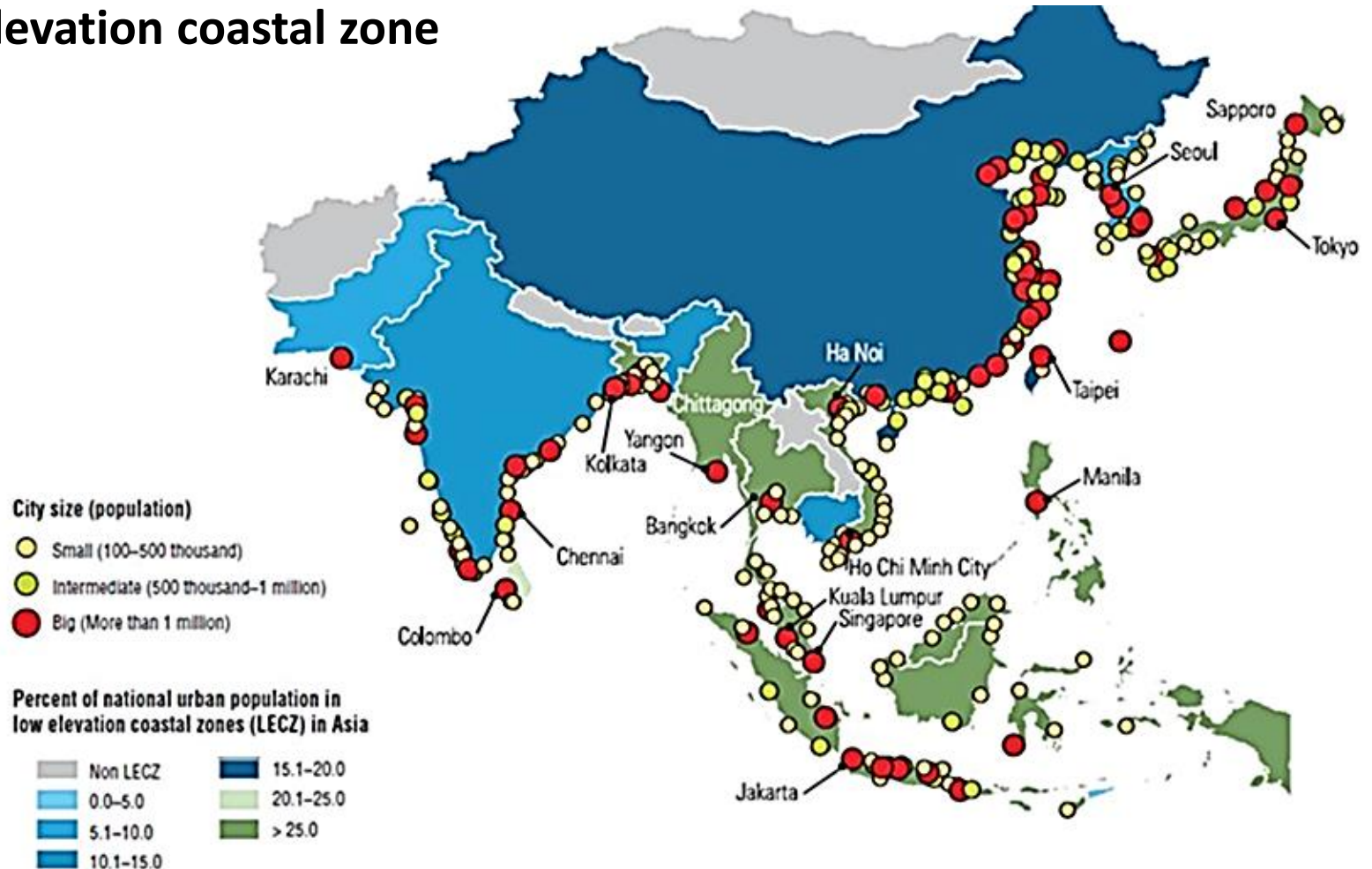


Thank you
for your attention

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Deltas and Coastal Cities in Asia

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



Source: Fuchs, R (2010): Cities at Risk: Asia's Coastal Cities in an Age of Climate Change. In: Analysis from the East-West Center, No. 96.

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)

CRI 1994–2013 (1993–2012)	Country	CRI score	Death toll	Deaths per 100,000 Inhabitants	Total losses in million US\$ PPP	Losses per unit GDP in %	Number of Events (total 1994–2013)
1 (1)	Honduras	10.33	309.70	4.60	813.56	3.30	69
2 (2)	Myanmar	14.00	7137.40	14.80	1256.20	0.87	41
3 (3)	Haiti	16.17	307.80	3.41	261.41	1.86	61
4 (4)	Nicaragua	16.67	160.15	2.98	301.75	1.71	49
5 (7)	Philippines	19.50	933.85	1.13	2786.28	0.74	328
6 (5)	Bangladesh	20.83	749.10	0.54	3128.80	1.20	228
7 (6)	Vietnam	23.50	391.70	0.48	2918.12	1.01	216
8 (8)	Dominican Republic	31.00	210.45	2.38	274.06	0.37	54
9 (10)	Guatemala	31.17	83.20	0.68	477.79	0.62	80
10 (12)	Pakistan	31.50	456.95	0.31	3988.92	0.77	141

Climate-related Disasters – Deltas as hotspots

Region	Area	Major Cities
East Asia	<ul style="list-style-type: none"> • Coastal areas of PRC • Deltaic areas of Yellow, Yangtze, and Pearl rivers • Southern Honshu • Qinghai-Tibetan Plateau 	<ul style="list-style-type: none"> • Guangzhou • Nagoya • Osaka • Shanghai • Seoul • Tianjin • Taipei City
South Asia	<ul style="list-style-type: none"> • Deltaic areas of Ganges-Brahmaputra, Mahanadi, Godavari, Krishna, and Indus rivers • Nepal's Himalayan region • Most of Bangladesh • Southern Parkisan 	<ul style="list-style-type: none"> • Chennai • Dhaka • Kolkata • Mumbai • Karachi
Southeast Asia	<ul style="list-style-type: none"> • Deltaic areas of Mekong, Red, and Irrawaddy rivers 	<ul style="list-style-type: none"> • Bangkok • Ho Chi Minh City • Jakarta • Manila • Singapore

Deltas in a Changing Climate: Key Features

❖ Deltas – low lying coastal areas

- fertile, food baskets
- often strongly urbanized
- rich ecosystems
- often in transboundary river basin



❖ 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



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

- **Bring key players together** in the deltas:
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Adaptive Delta Management

Adaptive Delta Management (ADM)

An approach that develops common-sense measures to deal with large uncertainties in future developments (Delta Programme, 2014).

Key points of Adaptive Delta Management:

1. Linking short-term decisions with long-term objectives
2. Incorporating flexibility in possible solution strategies depending on developments
3. Linking different investment agendas.