

A stylized, solid blue map of the Asian continent is positioned in the upper left portion of the page. The map is minimalist, showing the major landmasses of Asia, including the Indian subcontinent, Southeast Asia, and East Asia. The background of the entire page is white.

**SUMMARY OF THE
REGIONAL FORUM ON**

**BUILDING
RESILIENT
ASIAN
DELTA**



WHY IS THERE SUCH AN URGENT NEED TO FOCUS ON ASIAN DELTAS?

Home to over 400 million people and a wealth of biodiversity, Asia's great deltas are critical to the economies, food security, poverty alleviation and sustainable development of the continent, as well as to global industrial and financial systems. However, these deltas are sinking and shrinking due to the drastic reduction of sediment flows in the mighty rivers that create them as well as human activities in the deltas themselves. This challenge is further exacerbated by the impacts of climate change. According to the recent IPCC Special Report on the Ocean and Cryosphere (2019), there is "high confidence" that the world's deltas will face "high to very high risks" from rising sea levels, even under scenarios where the world rapidly reduces emissions of GHG and minimizes the rise in global temperature and the subsequent melting of ice sheets and glaciers. With deltas already sinking and shrinking and therefore becoming ever more vulnerable to disasters, it is critical that there is a bold, ambitious and concerted effort to build resilience by tackling the root causes of the crisis since these deltas support huge populations, mega cities, incredibly productive rice bowls and fish baskets, and unique biodiversity.

WHAT DID THE FIRST REGIONAL FORUM ON BUILDING RESILIENT ASIAN DELTAS ACCOMPLISH?

The [RAD conference](#) organized by WWF with financial support from the Stockholm Environment Institute (SEI), the Government of Sweden and the Raoul Wallenberg Institute (RWI) brought together over 140 participants from Asia's seven largest deltas as well as many regional and international experts to deepen understanding of why these deltas are sinking and shrinking, and to identify best practices and solutions to tackle the root causes of this threat. It provided a great opportunity for a large number of stakeholders with a wide range of perspectives to share insights and learn from each other. Organizing the multi-country event provided an unprecedented opportunity to build synergies across countries and enable regions, cities, the private sector and development partners to grasp the magnitude of the challenges and the urgent need to better coordinate and leverage their respective understandings and actions. It also provided a platform for innovative solutions and the development of stronger and more transformative partnerships. Finally the regional Forum highlighted the need to engage communities and diverse stakeholders to hear how changes are impacting their daily lives in a way that hasn't been done before and build on their invaluable understanding and knowledge.

WHAT HAVE WE LEARNED FROM THE CONFERENCE DISCUSSIONS?

ASIAN DELTAS ARE ALL SINKING AND SHRINKING, HOWEVER, THE ROOT CAUSES ARE OFTEN NEGLECTED.

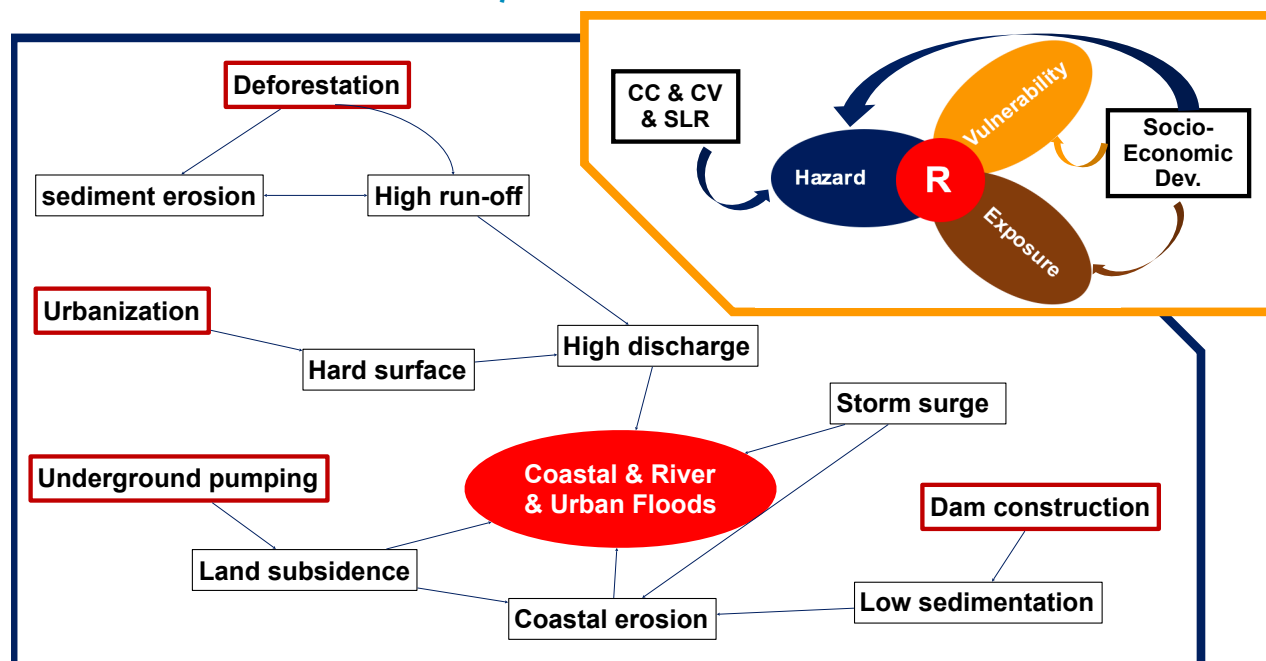
Sinking (land subsidence) and shrinking (erosion) of Asian deltas have different socioeconomic and ecological implications on people and nature not only within delta regions but regionally and globally through the impact on supply chains and trade. However, despite many attempts to safeguard these deltas, the situation is only becoming worse because our current interventions have failed to use

a systematic approach to tackle the root causes of the threats, including:

- disruption of river and sediment flow due to infrastructure development, e.g. dams and barrages in both upstream sections of the rivers, or in the deltas;
- groundwater extraction that is lowering water tables in cities like Bangkok (in the heart of the Chao Phraya delta);
- removal of nature buffers, such as deforestation that increases runoff in the river basins or loss of wetlands and mangroves due to agricultural expansion so that they
- urbanization that causes faster and higher discharge exposing more people to the harmful effects of floods, e.g. the Pearl River delta.

Human activities upstream and in situ are reducing the resilience of deltas to climate change with high costs to people, nature and economies. As a result, we are seeing increased vulnerability in the face of stronger materialization of climate change through sea level rise and increasingly frequent and intense natural disasters.

COMPLEX PROCESS B/W NATURE & HUMAN-BEING



From presentation by Dr. Seree Supratid, Rangsit University, Thailand

RAD IS AN EFFECTIVE ADAPTATION STRATEGY. Tackling the root causes of delta sinking and shrinking by restoring river and sediment flows and restoring natural buffers can improve resilience to sea level rise, salt water intrusion and exposure to extreme weather events, hence it is one of the effective climate adaptation strategies.

NATURE BASED SOLUTIONS WITH INCLUSIVE STAKEHOLDER PARTICIPATION ARE CRITICAL. Deltas need a new context specific and sustainable development model, avoiding and learning from mistakes in the past and taking the new normal into consideration. Some nature based solutions have already been implemented in delta regions, such as flood retention parks designed to perform “monkey’s cheek”¹ functions in Thailand, flood-based agriculture and integrated mangrove conservation and shrimp farming in Vietnam, and mangrove rehabilitation and integrated flood defense system in Indonesia. The main challenge is to secure political support and redirect financial and investment flows towards sustainable, nature-based, long term solutions to safeguard vulnerable people and communities. This implies the strong involvement of local stakeholders in decision making and coordination across the different spatial scales (from local to national and river basin scales). Some of the nature based solutions can generate immediate financial returns, while clarifying the positive impacts on livelihoods, security and biodiversity through cost-benefit-analysis for nature based solutions can certainly offer competitive investment opportunities.

INFRASTRUCTURE INVESTMENTS NEED TO BE TRANSFORMED. Investing in climate resilient sustainable infrastructure can significantly reduce the risks faced by Asian deltas. Evidence shows that these investments are also highly beneficial from economic and development perspectives. We need to recognize the limiting factors and help to use tools, criteria, capacity building and other innovations to scale up investments in these “good infrastructures”. The Dutch supported Water as Leverage Programme is one of the cutting-edge examples where policy makers, local governments, civil engineers, financiers and communities are brought together to co-design urban adaptation, integrated solutions to improve climate resilience through improved water management.



A panel discussion with representatives from provincial government, business consultant, UN agency, government pension fund, multilateral development bank, youth representative, university and research community to talk about the way forward to save Asian deltas, photo credit @WWF-Greater Mekong

¹ Monkey's Cheeks project (or Kaem Ling) is flood control project based on a suggestion of the King Bhumibol Adulyadej of Thailand. The idea is from his observation that monkeys always store bananas in their cheeks, and gradually eat them. Thus, he applies this concept to be the project that has been used to solve the flooding problems of Bangkok.

MOBILIZE RESOURCES

GOVERNMENT, PROVINCE AND CITY FINANCE

- General / sector specific budgets
- Tax / charges
- Public funded payments for ecosystems
- National development banks

INTERNATIONAL DEVELOPMENT FINANCE

- Grants
- Loans
- Equity
- Guarantees and risk insurance

PRIVATE SECTOR FINANCE

- Project finance
- Loans
- Equity
- Green bonds

BLENDED FINANCE

- Gov. finance + Private finance
- Int. dev. finance + Private finance
- Gov. finance + Int. dev. finance + Private finance

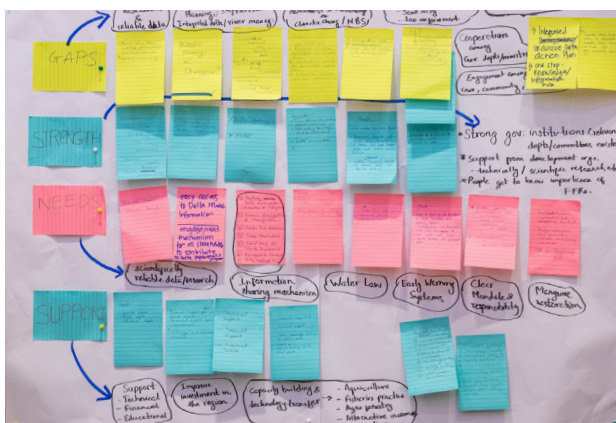
From presentation by Mr. Marcel Dupuis, WWF



entation by Mr. Amrit Cado van der Lelij, Deltares
Sujana

THINK WIDE ON FINANCING OPTIONS. There is a wide array of financing sources, public and private, domestic and international which can support interventions in deltas that will restore/improve resilience. It would be valuable, especially for domestic financial institutions, to filter their investment portfolios against resilience building and long term adaptation objectives, and thus bring the system changes required in a landscape finance framework. Public resources will not be sufficient and private sector resources need to be leveraged, while the sequencing of those interventions can be optimized to reduce risks and improve returns. The rationale and opportunity are usually well understood by financial institutions but there is a need to ramp up our capacities to develop more ready-to-invest bankable projects and promote them with corporate and commercial banks. Insurance companies can also play a major role through engaging their upstream and downstream clients to look at aggregation risks and to themselves invest in climate resilient projects through a system approach to buy down clients' risks.

WE NEED INCLUSIVE AND EFFECTIVE GOVERNANCE. It requires an integrated approach and need to assess, communicate and secure buy in from all types of stakeholders, from public to private, from investors to consumers, from elderly to youth. There will be inevitably conflicts of interests when many stakeholders are gathered for consensus building, however, with increased awareness raising, solid scientific evidence, and involvement of financial and business risks practitioners, innovative solutions will emerge, and investments will follow.



From RAD conference group work



@WWF-Greater Mekong

NEXT STEPS

- **Consult further with respective governments and key stakeholders** towards co-creating action plan and securing funding to implement it, i.e. a multi-country GCF concept note.
- **Strengthen partnership** with Global Center for Adaptation (GCA), World Economic Forum (WEF) and Delta Coalition to influence key policy makers to acknowledge the significance and urgency of the specific challenges faced in Asian large deltas, and to move response plans to the top of political agenda, i.e. Convention on Biological Diversity (CBD) 2020 and Vietnam's ASEAN chairmanship in 2020. At the same time bringing more partners on board.
- **Identify the bankability of a wide range of nature based solutions and engage financiers and investors**, i.e. Dutch Fund for Climate and Development (DFCD) is a good entry point for this stream of work.
- **Conduct private sector mapping** to identify key corporates and financial institutions with assets, operations and supply chains contributing to delta sinking and shrinking and/or being impacted by delta threats - and engage them on actions.
- **Provide opportunities for cross-delta learning and knowledge sharing.**

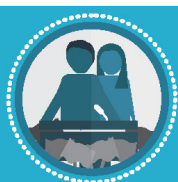
ABOUT RESILIENT ASIAN DELTAS

Resilient Asian Deltas (RAD) Initiative – driven by WWF, the initiative was launched in July 2019 at the High-Level Political Forum (HLPF) for SDGs with support from the Government of the Netherlands, AB InBev and the World Economic Forum. It is a programme designed to influence political leadership, pilot and scale up nature based solutions, and redirect investments towards climate resilient and green solutions to stop the deltas from further sinking and shrinking.



GOALS AND OUTCOMES OF RESILIENT ASIAN DELTAS

The goal of this initiative is to stop Asia's great deltas from sinking and shrinking.



**SECURE POLITICAL
LEADERSHIP,
COMMITMENTS
AND ACTION**

Political commitments are secured at the highest level and translated into visions and strategies



**IMPLEMENT
BUILDING WITH
NATURE
SOLUTIONS**

Building with nature principles are integrated into policies and translated into solutions for implementation



**MOBILIZE
FINANCING TO
TURN VISION
INTO ACTIONS**

Public and private sector financing options are identified and resources are mobilized

More information:

- Summary video from the Regional Forum on Building Resilient Asian Deltas is available at <https://www.youtube.com/watch?v=4AOUBbuZyZs>
- More information on RAD Initiative is available at https://wwf.panda.org/our_work/water/freshwater_initiatives/resilient_asian_deltas_initiative/



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