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IFRM Workshop

March 19th 2019, ADB HQ

Consultancy Team

- Ian Wood – Team Leader and Climate Change Specialist
- Anthony Green – IFRM Specialist
- Guillaume Dulac – Economist
- Pete Harrison – Senior Project Manager / Junior IFRM Specialist
- Mark Lawless – Backstopping Co-Director / JBA Representative
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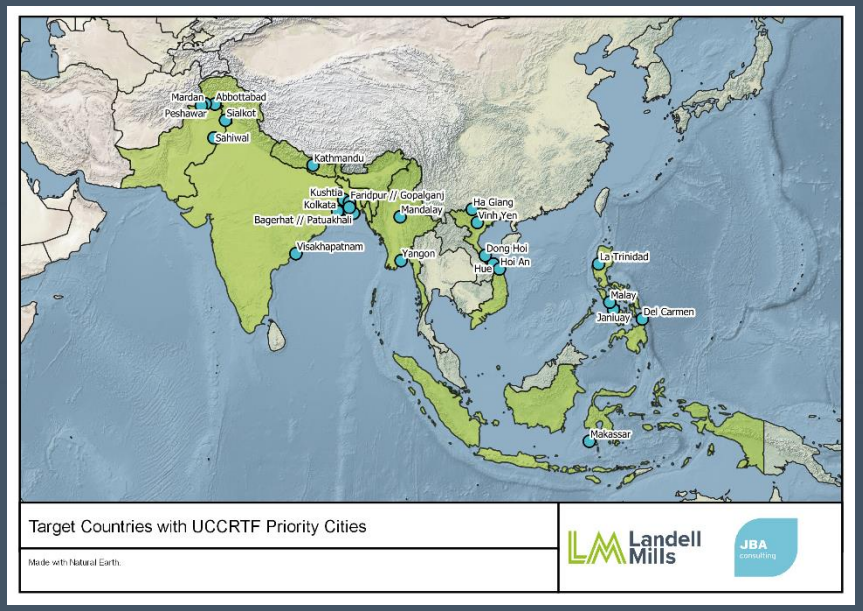
- Ian Munt – Urban planner
- Jane Toothill – Finance and insurance
- Susan Novak – Gender and social inclusion
- National experts in 8 countries

TA 9634-REG: Strengthening Integrated Flood Risk Management

This KSTA assignment will identify locations in target DMCs where innovative IFRM investments (including NBS) can be made.

Additionally, it will enhance knowledge and application of IFRM strategies in DMCs.



Pakistan, India, Nepal, Bangladesh, Myanmar, Vietnam, Philippines, Indonesia

TA Objective and Outputs

Objective

Strengthen the design and implementation of IFRM solutions, enhancing knowledge and application of IFRM strategies in DMCs

Output 1

Knowledge to implement IFRM projects enhanced

Output 2

Evaluations of DMC flood risk management and investment strategies conducted

Output 3

IFRM concepts integrated into ADB investments

TA Knowledge Products / Deliverables

- **Practical Guide to Implementing IFRM**
- **Extensive stakeholder engagement** in each DMC
- **Sector analysis reports** which examine flood risk in DMCs and evaluate the effectiveness of current flood risk management strategies
- **Enhanced Engagement Tool**
- **Optioneering analysis**, to determine long lists of potential IFRM solutions, while simultaneously **achieving environment and social benefits**
- Support to **ADB future investment projects** through the integration of IFRM into concept papers / ongoing projects.

What is IFRM?

- Scale of risk is too great for any one solution
- Solution lies in **many eggs, many baskets**
- Integrates:
  - Social, economic, financial, environmental, and institutional aspects
  - Engineering, disaster preparedness, insurance, and emergency response requirements
- Limit the impact of any one failure

Components of IFRM

- Catchment-based approaches, involving
- Structural, Green (NBS e.g. room for the river) and Property Level protection
- Non-structural interventions, such as
  - Early warning systems
  - Emergency response and preparedness
  - Disaster risk financing
- Institutional
  - Innovative lending mechanisms
  - Governance
  - Land-use planning

Opportunities, challenges

"The trick is in the balance"

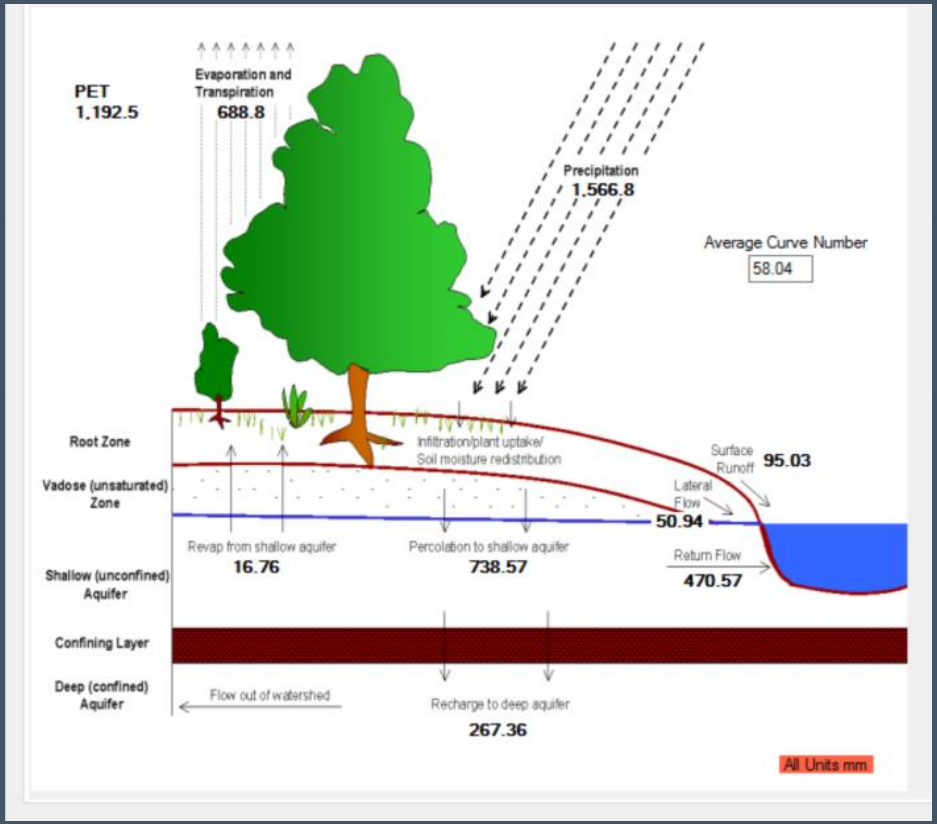
NBS: Nature Based Solutions

Four Categories

- Catchment
- River Channel/floodplain
- Drainage/runoff
- Estuary and Coast

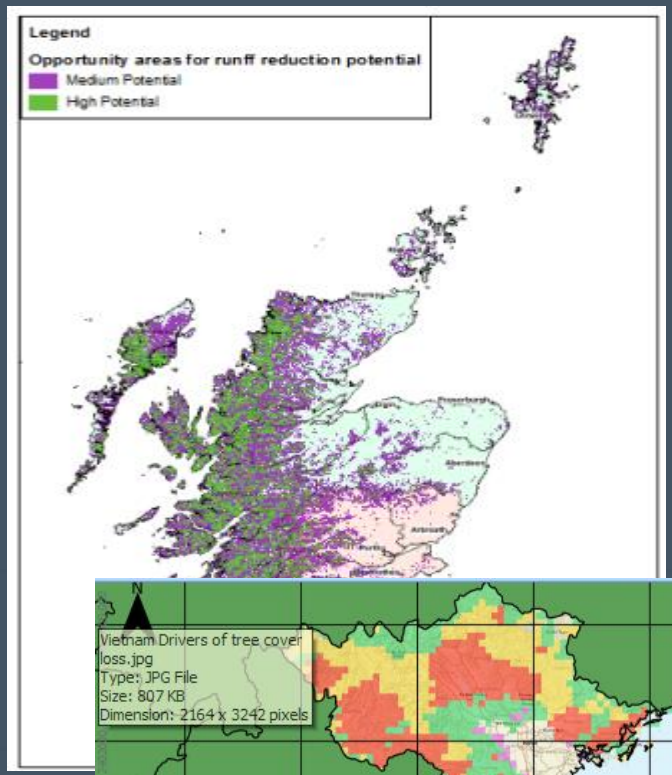
Effectiveness

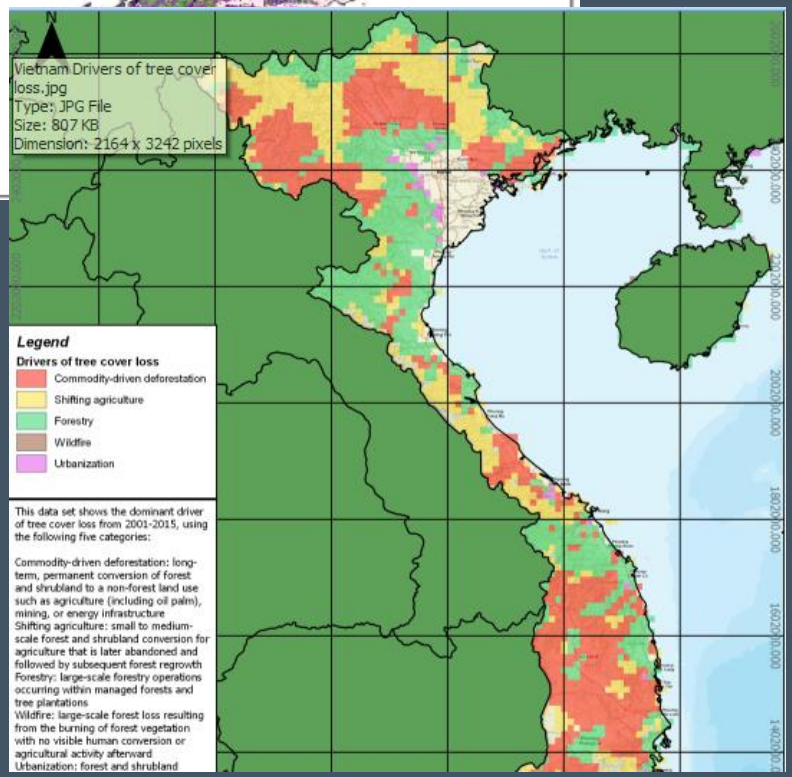
Constraints



NBS - Catchment

- Catchment: Protecting and Restoring Catchments and Wetlands
- Improving farm practices
- Valuing Ecosystem Services
- Identify Potential

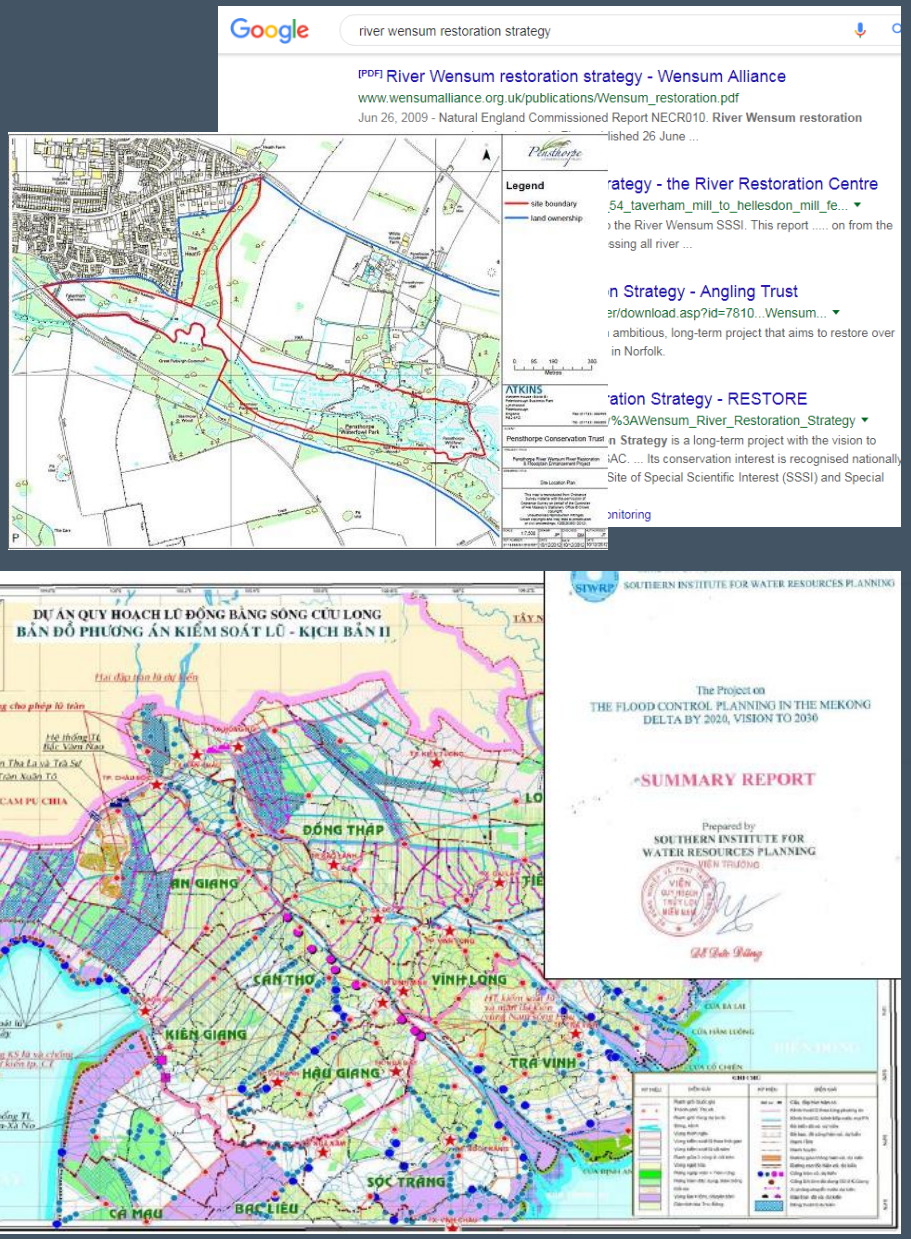




NBS – River Channel and Floodplain

- Allowing room for the river
- Protecting & restore functional floodplain and wetlands
- River meander development

Multiple benefits for ecology, fisheries, flood rate of rise and level



NBS – Runoff Control and Drainage

- Management of Runoff within urban areas
- Storage and controls
- Greening of Cities
- Property level – storage and green roof/garden
- Restoring local river courses
- Wetland treatment of poor water quality
- New Technologies for flood management
- Solid Waste Management

NBS – Estuaries and Coast

Managing tidal storage and sediment processes – example Bangladesh Beels

Mud flat and mangroves to reduce storm surge

Sand and shingle management on coast - beach recharge and dune preservation rather than walls

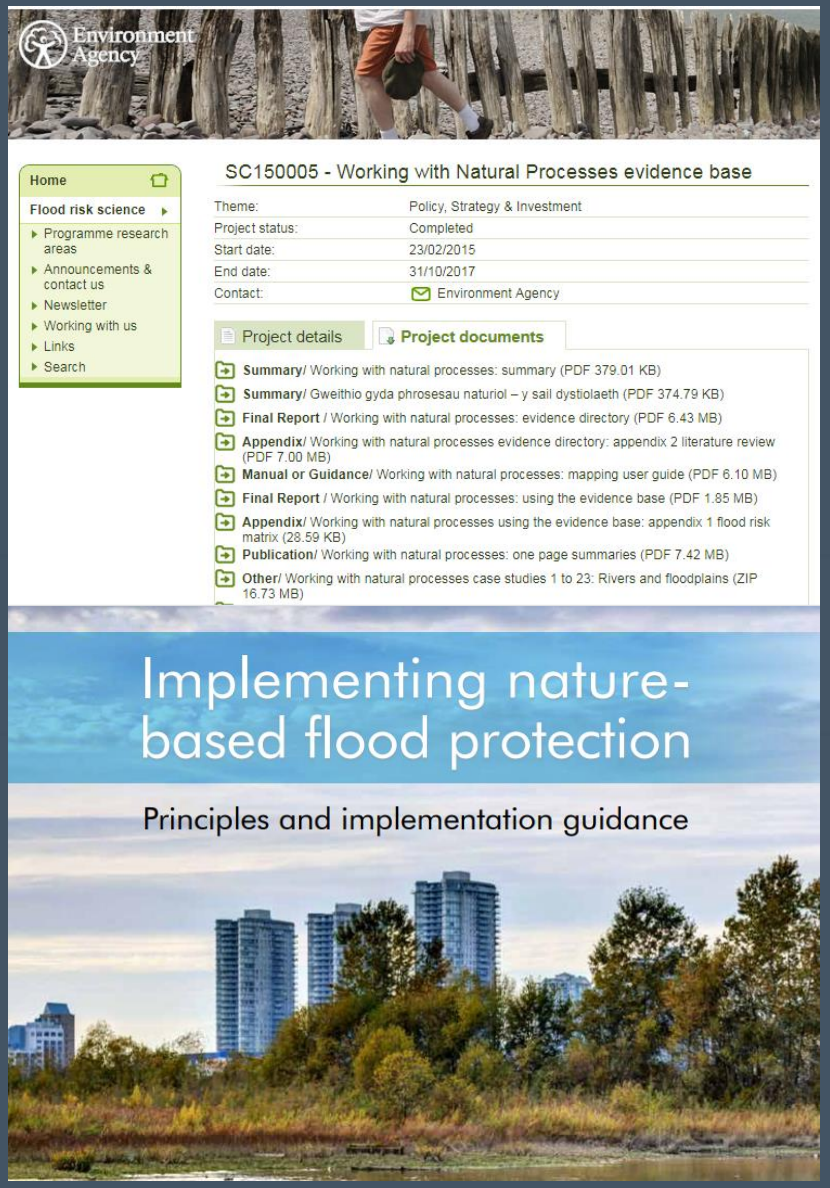
NBS – Evidence Base

Compilation of existing NBS schemes available for UK & Europe

Some successful Mangrove schemes

For Asia initiatives including Natural Capital Accounting and PES

Floodways on major rivers work and simulation models show consequences of loss



Case example 2011 Thailand floods

- $45 billion in damages, in top ten most expensive disasters in history
- Most losses occurred in industrial estates, many of which had been built in the last 20 years on flood-prone land, but without adequate flood protection
- Since the event, Thailand has invested in millions in flood protection works
- Insurers have undertaken a complete reappraisal of risk

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Could this disaster have been avoided with IFRM?

- Macro level planning
  - Regional economic development
  - Towns, facilities, transport, other infrastructure
- Detail area planning
  - Subdivision layout, setbacks, floodways, corridors,..
- Flood protection/management
  - Reservoirs, dyke systems, forecast, warning, response
- Urban design
  - Minimum floor levels, road access, contingency planning
- Insurance and risk assessment / Disaster Risk Information

Existing urban situations

- Urban renewal
- Affordable housing
- Solid waste management
- Transport planning
- Safeguards

Introducing the group discussions

- We are hoping to reconcile idealistic vision of IFRM with practical application in ADB
- TA to contribute to alignment of ADB operations with highest IFRM standards
- Output level is strategic and its operationalization
- Seeking feedback – hopes / concerns / expectations in IFRM implementation
- What improvement can be made in ADB projects and/or what capacity is lacking?


CHALLENGES
Institutional barriers
Planning constraints
Capacity/ tools
Governance
Lending mechanisms
Safeguarding
Long-term approach
Low appetite
Bankability
OPPORTUNITIES
Adaptability
Resilience
Air quality
IFRM
Tourism
Liveability
Biodiversity
Jobs
Carbon sequestration
Perceptions:
"complicated"
"idealistic"
"uncertain"
"doesn't fit"
"need sure bet"

Urban planning

- Increasing vulnerability to flooding with the urban poor
- Land use plans influence the location, type, design, quality, and timing of development → IFRM
- Risk-based planning to identify the safe areas to prioritize investments in development
- Planning and building codes for DRR
- Planning and environmental design promotes liveable cities

Climate change

- Increasing temperatures, rising sea levels, and changes in rainfall pattern and the frequency-intensity relationship will affect flood risk
- Combined with land-use change and economic development, flood damages will increase
- Uncertainty in CC projections is unavoidable
- IFRM promotes adaptable management based on suite of solutions

Gender and social inclusion

- Floods have different impacts on the physical safety, livelihoods and health of women and men, as well as on other social groups
- Women and other social groups are frequently perceived as “victims”, e.g. women and children are perhaps more likely than men to be injured or die
- In the aftermath women can be at increased risk of gender-based violence and/or have less access to the resources they need to recover
- Women and other social groups are often marginalized in the FRM process and/or gender/social inclusion issues are not addressed