

Land use and IFRM

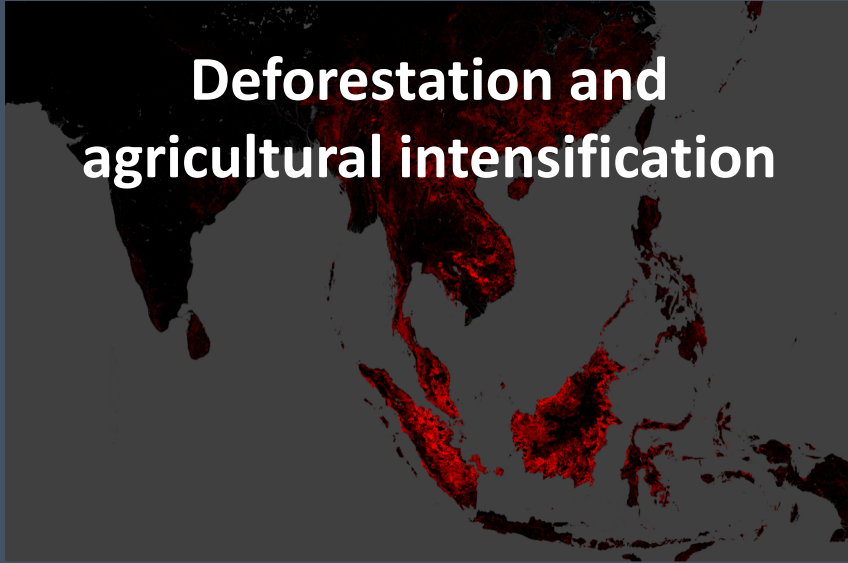
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TA 9634-REG: Strengthening Integrated
Flood Risk Management

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If land use change is a significant driver of flooding

Deforestation and agricultural intensification



Smaller scale changes to agricultural practices



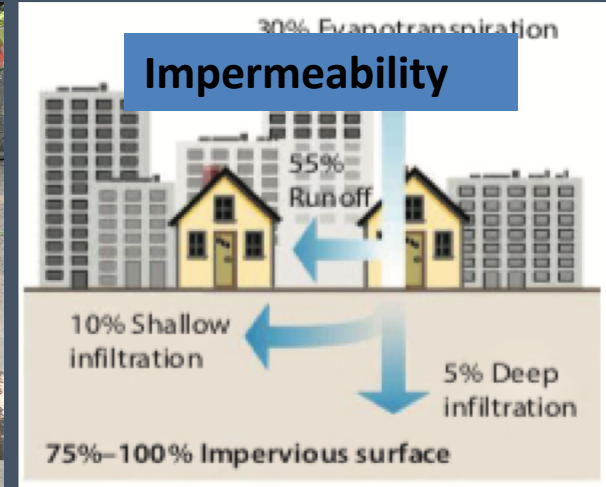
Resource extraction



Urbanisation and urban expansion



If urban flooding is



multi-causal, complex, compounded



... then FRM in urban development necessitates multiple tools and solutions

Regulation and Rules Solutions

- Zoning plans and ordinances
- Development controls (land use and density)
- Building codes (elevated structures, flood proofing, green buildings)

Organisational / Behavioral Solutions

- Awareness campaigns
- Mandatory risk disclosure
- EWS
- Public information
- Organisational structures, staffing and training
- Community mobilisation

Integrated approach to urban flood management

- Property taxes
- Infrastructure levies
- Flood insurance
- Land readjustment, pooling, acquisition
- Incentivized fiscal transfers
- Municipal bank loans
- Municipal bonds
- Preferential tax, tax credits and holidays
- Conditional permitting
- Penalties, fines, fees

Financial and Economic Solutions

- Green infrastructure
- Nature based solutions
- Green and grey

Structural Solutions

If land use change is a significant driver of floodingand urban flooding is multi-causal, complex, compounded then FRM in urban development needs multiple tools and solutions. But

When is a given solution relevant?































What might prevent success?

And how can we overcome these barriers?

Task Force

- Using your practical in-country understanding, each Group will discuss one of the following propositions, and provide feedback on the question posed.
- Split into 4 groups
- Discuss and respond (20 mins) – using stickies on prepared matrix
- Each group will provide a focused and concise feedback (3 mins)

IFRM Nuts and Bolts

What are the conditions for success	What prevents effective implementation (the barriers)?	How can you overcome these barriers / bottlenecks?
	 	 
 	 	   
 	 	 
	 	 
 	 	 

Task Force GROUP 1

Proposition: Zoning is one of the most widely practiced planning methods.

Under what circumstances is zoning a low cost response to flood risk management?

Task Force GROUP 2

Proposition: local government finances are often stretched between competing priorities. Fiscal measures can provide some room for manoeuvre.

Under what circumstances can fiscal measures be used as flood risk management tool?

Task Force GROUP 3

Proposition: Flood management is mainly financed through central transfers, though there are circumstances where financing from other sources can be raised.

Under which circumstances is it relevant to use local public debt and private financing to address flood risk?

Task Force GROUP 4

Proposition: Floods can have traumatic impacts. They often have to be addressed with a severe constraint on resources.

Assume there are two places with the same population and a given amount of resources earmarked for IFRM for both. On what basis would you allocate funding to each?