

Climate Resilient Development



Opportunities for including slow
onset climate events

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Many non-climate related stresses



Poor planning



Land use,
land cover change
Fragmentation
Land degradation
Exotic/invasive species

As well as Socio-economic factors

Pressures interact with each other and climate change

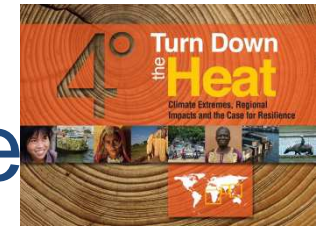
Challenges: detecting and accepting slow onset events

- **Climate**

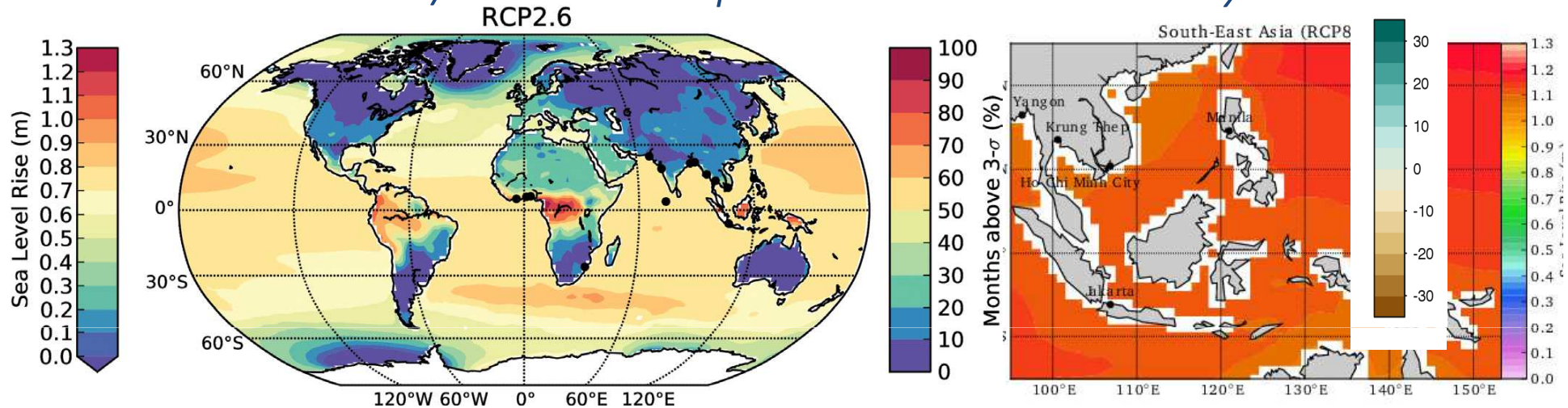
- Limited Observations: climate, environment etc
- Some not easy to observe – e.g. salinity, changes in marine fisheries
- Critical thresholds
- Secondary and large scale consequences, not always predictable – e.g. wildfires, collapse of social structures and ecosystems

- **Loss and damage:** socioeconomic baselines, asset maps

Varied Global and Regional Change

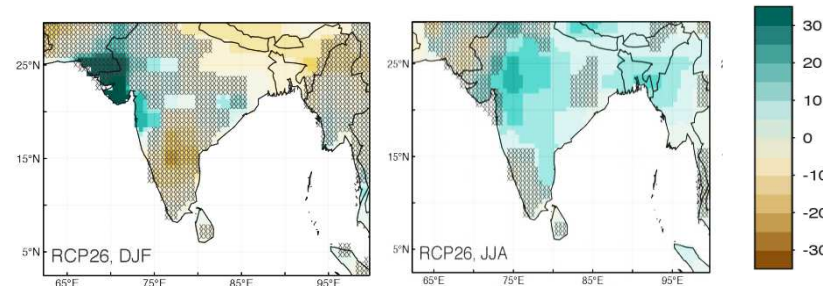
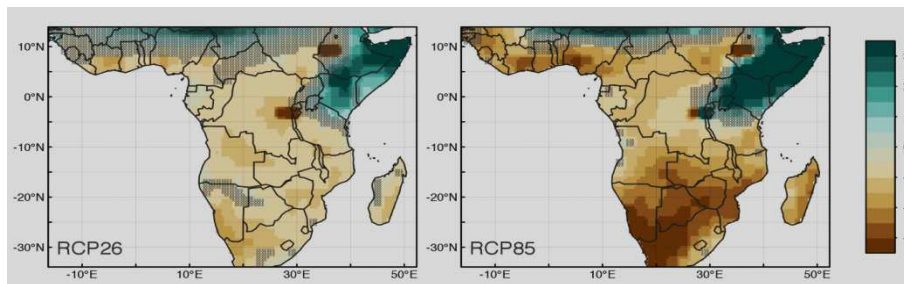


Summer/hot season temperatures and sea level rise by 2100



Hyper-arid areas – low to high emissions risk to Food production

Changes in wet and dry season ppt



Integrate climate risks into development

Goal:

- Changed decision-making process –
 - include climate risks along with other risks
 - Consider short-term risks and long term risks
- Develop tools and approaches to support the decisions
- Get asset data, build in fast response systems
- Develop an M&E framework for outcomes

Approaches – phased (1)

- Initial phase – allows engagement across multiple development sectors, stakeholders
 - Improves understanding of the slow, often medium-to-long term risks
 - Time for solid analysis to help with decision-making
 - Allows time to gather data, develop tools and decision-support systems
 - Allows prioritization – focus on the poorest and most vulnerable
 - Start setting up long-term institutions to coordinate and facilitate efforts, house data/info etc

Approaches – phased 2+

- Design of interventions and investments
- Assess risk for long-term investment and include measures
- Social – long-term changes to lives and livelihoods: trade-offs between retreat, protection and accommodation options (challenge: hard decisions)
- Planning – multiple risks to be considered over long-term horizons
- Address current “stresses” :
- Investments in early warning systems
- Overall---
 - support changes in policies,
 - On the ground investments – (learning by doing)
 - Financial instruments – quick access to resources when needed
 - Support for institutional arrangement

Climate Investment Funds



Clean Technology Fund

Finance scaled-up demonstration, deployment and transfer of *low carbon technologies*

Investment Plans

- Support country and regional development strategies
- Leverage financial products of Multilateral Development Banks
- Stimulate private sector engagement

\$4.5 billion

Strategic Climate Fund

Targeted programs with dedicated funding to pilot new approaches with potential for scaling up

Pilot Program for Climate Resilience

Mainstream climate resilience into core development planning and implementation

\$ 1.2 billion

Forest Investment Program

Reduce emissions from deforestation and forest degradation

Scaling Up Renewable Energy in Low Income Countries

Create economic opportunities and increase energy access through renewables

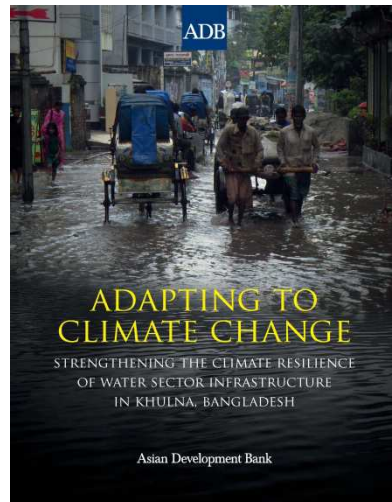
\$ 2.2 billion



PPCR Investments: Sectors and Thematic Areas



Housing



Cities



Infrastructure



Livelihoods

Modification of hydro-power infrastructure



Climate Data/
Hydromet Services

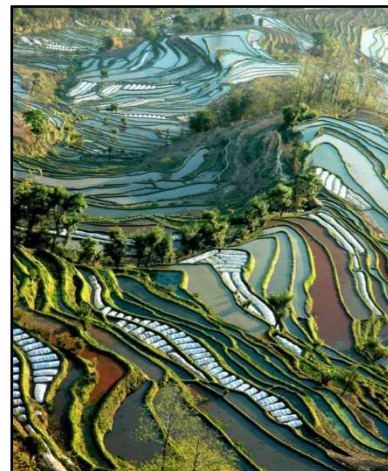
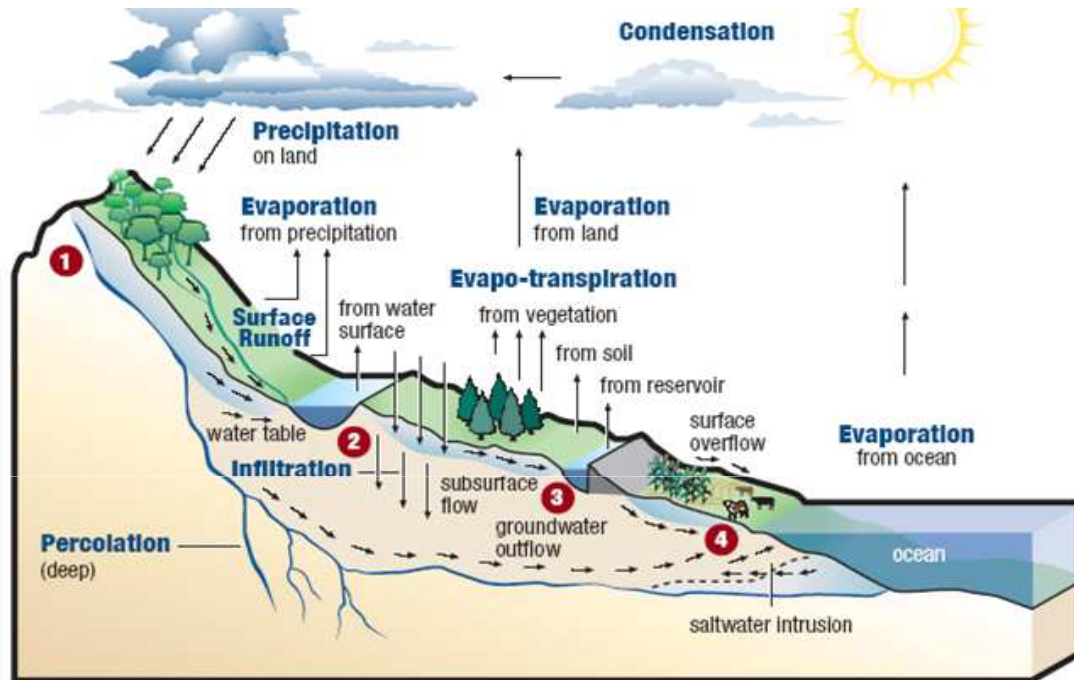
Agriculture



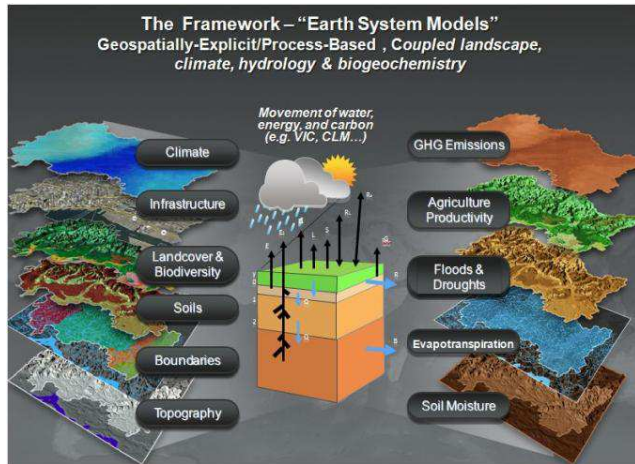
Other approaches – DRM and Resilience

- Disaster response transition climate resilient dev
- Goal: changed culture of decision-making to consider climate risks, e.g. Horn of Africa, Est. Caribbean
 - (Priority 1: immediate relief)
- A \$1.8 billion dollar drought response plan
 - Multiple institutions involved; multiple countries, regional institutions and international organizations
- Phase I (1-2 years)– Recovery with a focus on livelihoods, employment , food production, livestock management, rehabilitation of land/water systems
- Phase II+: Risk preparedness, risk reduction and ongoing and future slow-climate risk management
- Assesst maps, data bases and fast disbursement mechanisms
- Measurable results

Some promising approaches

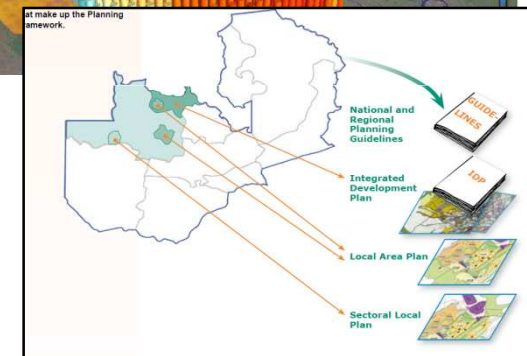
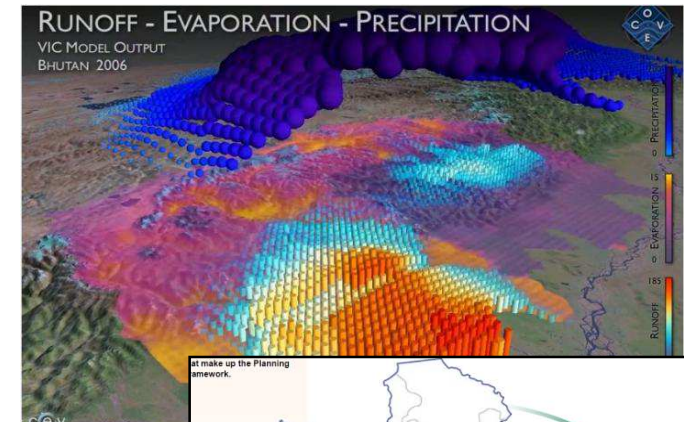


Planning and Changed Decisions



Information systems
high quality & long term
climate, terrain, land cover
& land use, infrastructure,
population & settlement
data sets

Analysis supported by observations



Disaster Risk Financing & Insurance Program



- Mainstream disaster risk financing and insurance in national DRM strategies
 - Knowledge management and capacity building
 - Product Development
 - Technical assistance and operations
- Partnerships
 - World Bank Group: FPD, SDN/GFDRR, Treasury, regional VPUs
 - Academic partners: Wharton School, NTU Singapore
 - Practitioners: Willis Research Network, Geneva Association, brokers, reinsurers
 - Regional development banks: IADB, ADB

Financial instruments

Concluding remarks

- Analysis and observational data
- Informed decision-making
- Willingness to make hard decisions
- Multi-sectoral, multi-stakeholder approaches over medium-long-term planning horizons
- Measureable results
- Data bases: assets and risks
- Responses: fast disbursement when needed
- Learning by doing... sharing knowledge, developing national-regional expertise
- **Flexible approaches** – changed institutions and policies



Contacts

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More information

<http://www.worldbank.org/en/topic/climatechange>

<http://www.gfdr.org>

