

MANAGING CLIMATE-FRAGILITY RISKS FROM JAPANESE ASSISTANCE PERSPECTIVE

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Addressing Climate Fragility Risks in Asia and Pacific: Challenges and Opportunities for Achieving Sustainable Development

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Japan International Cooperation Agency

Key message

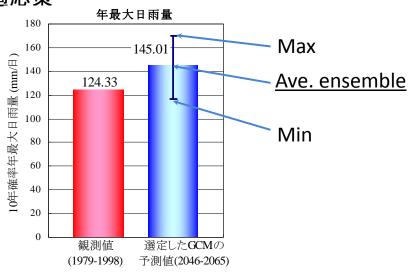
To manage climate-fragility risks development assistance in climate change and peace building should be integrated from a long-term perspective

Projects involved in Sri Lanka

• North Sri Lanka: Peace Building 平和構築



Climate Change Adaptation in major river basins
 気候変動適応策



Daily precipitation: once-in-10 yrs

• Tsunami recovery 津波復興



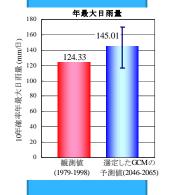
Implemented these projects separately

Peace building

Climate change

Disaster recovery







Contents

- 1. Climate change and security
 - 1. Security issues
 - Water resources
- 2. What approach should we take?
 - JICA's approaches in two sectors are not interlinked climate change & peace building
 - 2. to manage climate-fragility risk
- 3. Conclusion

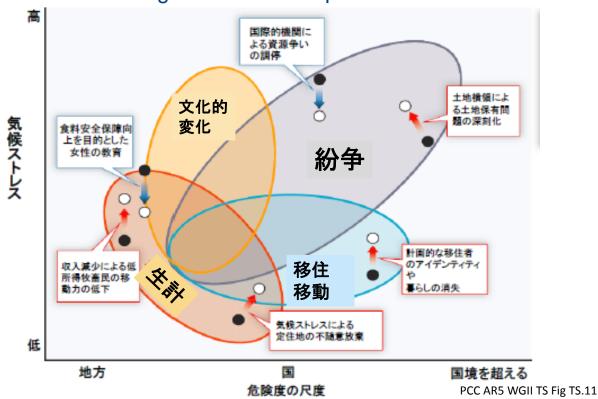
1. CLIMATE CHANGE AND SECURITY

- 1. Climate change is security issue
- 2. Water Security

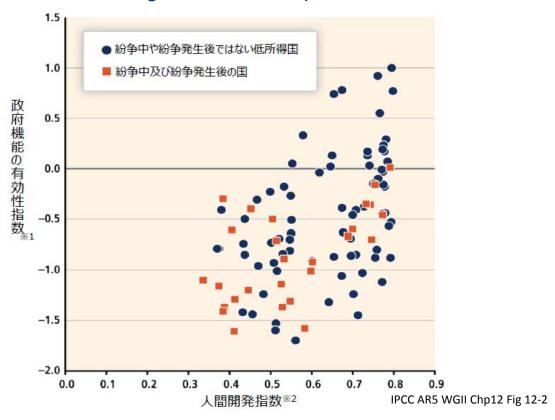
Climate change is one of top strategic risks in US



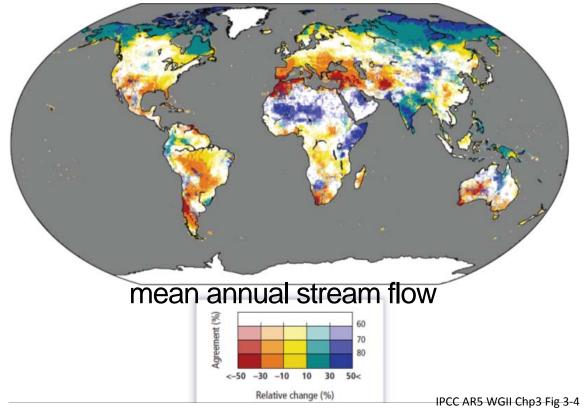
Human security will be progressively undermined as the climate changes: IPCC AR5 Report



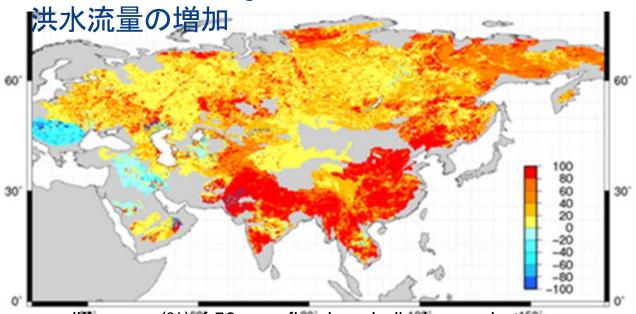
People living in places affected by violent conflict are particularly vulnerable to climate change: IPCC AR5 Report



2. Water Security River flow volume is changing 河川流量の変化



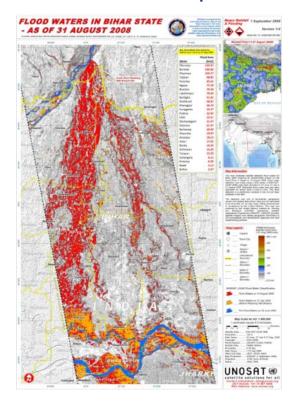
Flood is increasing in most Asian countries



difference (%)of 50-year flood peak discharges between future and present climates for MRI-AGCM3.2s

Magome J. et al. (2015) River discharge simulation of a distributed hydrological model on global scale for the hazard quantification, 21st International Congress on Modelling and Simulation,

Flooding in Koshi River: India-Nepal Boarder in 2008



3.3 million people affected in Bihar alone



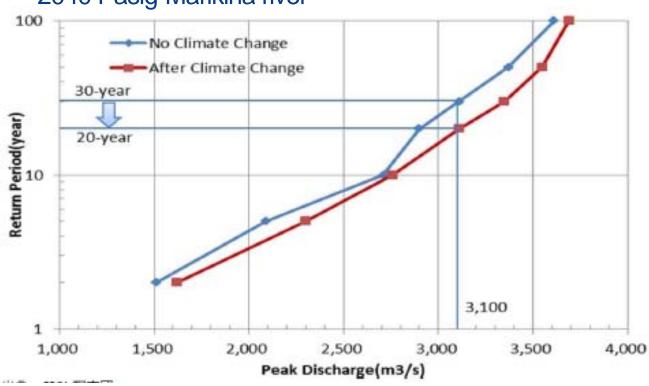
2. WHAT APPROACH SHOULD WE TAKE?

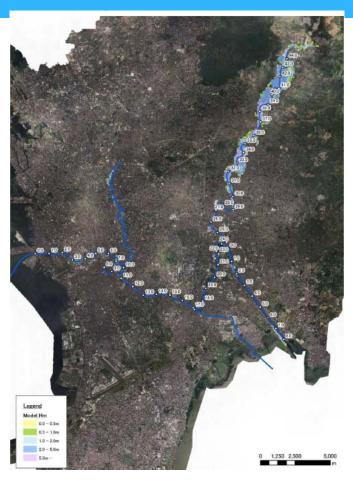
- 1. JICA's approaches in two sectors are not interlinked.
 - 1. climate change
 - 2. peace building
- 2. To manage climate-fragility risk

JICA approach in Climate Change Flood management in Metro Manila









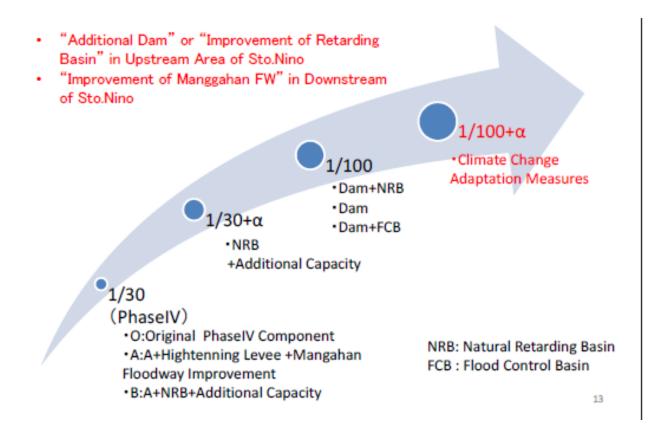
1/30 flood



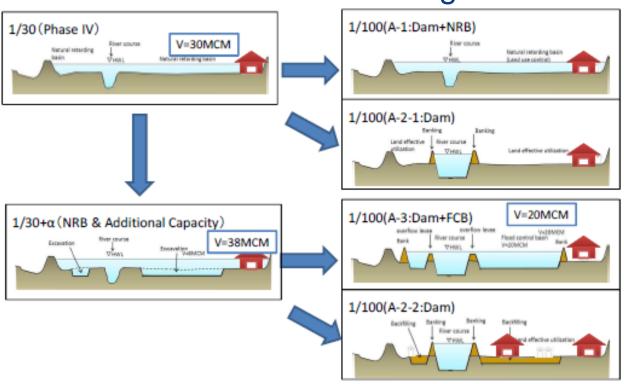
1/30 flood Under climate change

INCREASE

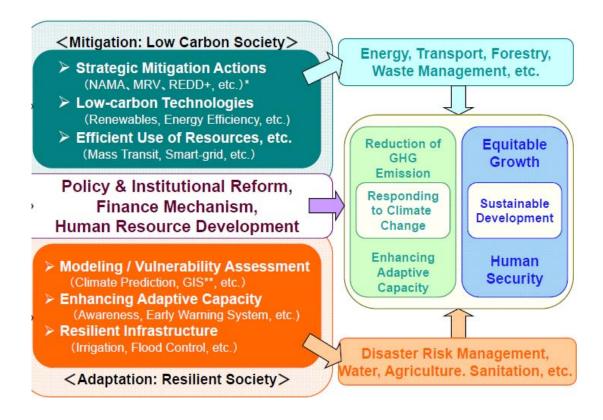
- Volume 8%
 3,100⇒3,350m³
- Inundated Area 45%
 10.4⇒15km²
- Depth 50cm 2.4⇒2.9m



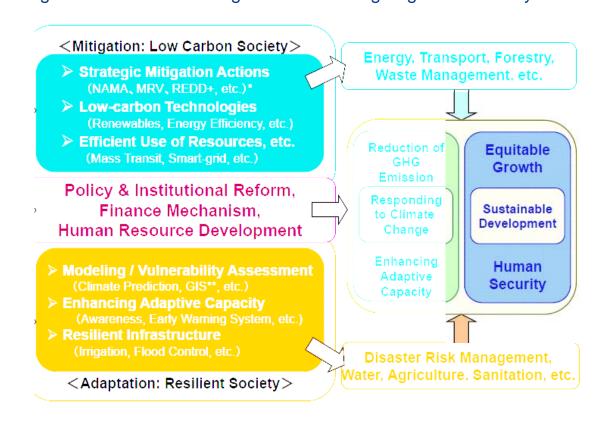
alternatives for flood risk management



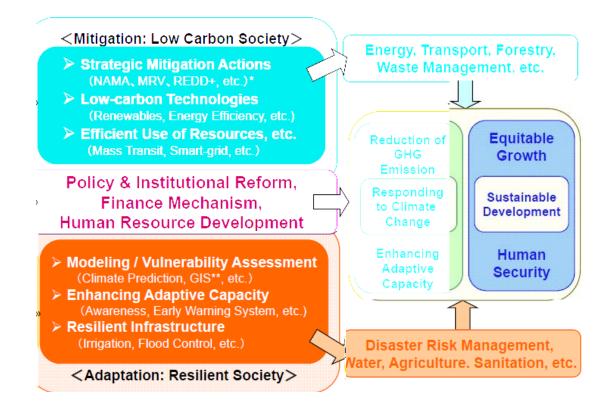
JICA approach in Climate Change (2) Low Carbon and Resilient Development Cooperation



JICA approach: Low Carbon and Resilient Development Cooperation recognizes CC is an imminent global threat endangering human security



JICA approach: Low Carbon and Resilient Development CooperationBut, priority activities are not directly linked to security issues.



2. JICA's approach: Thematic Guidelines on Peacebuilding priority areas not cover climate related activities

Social capital: infrastructure, health, education, food security

mic recovery: employment

Peacebuilding

Governance:

media judicial system, democratic, financial institution,

Security: security, demobilization and reintegration, small arms,

3. What approach should we take?

Long-term perspective

- Assessment linking fragility and climate projection assessment
- Integrating multiple sector activities
- Capacity development to respond to changing climate and society.

Assessment and activities

Scientific and Engineering Approach

Socioeconomic Approach

- Prediction, simulation: GCM, downscaling, flooding, drought
- Risk assessment
- Structural measures
- Early warning

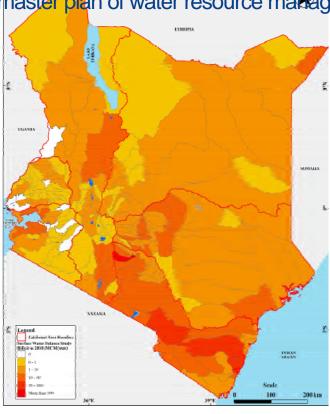
 PNA (Peace Building Needs & Impact Assessment)

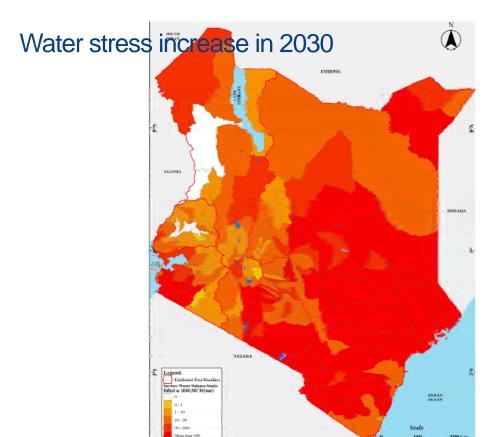
Politics, Socioeconomic, Security, Governance, Natural resources, Inequality

- Community-based
- Livelihood

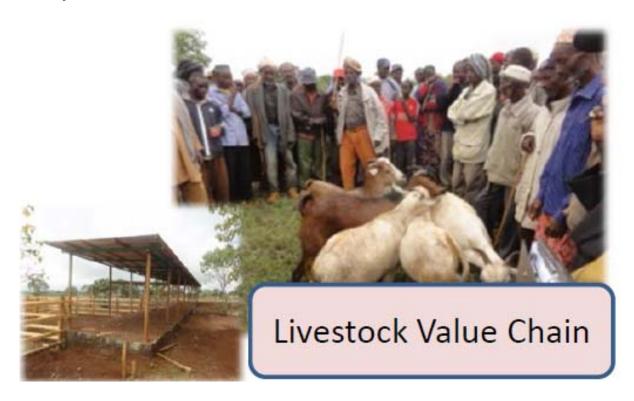
Kenya





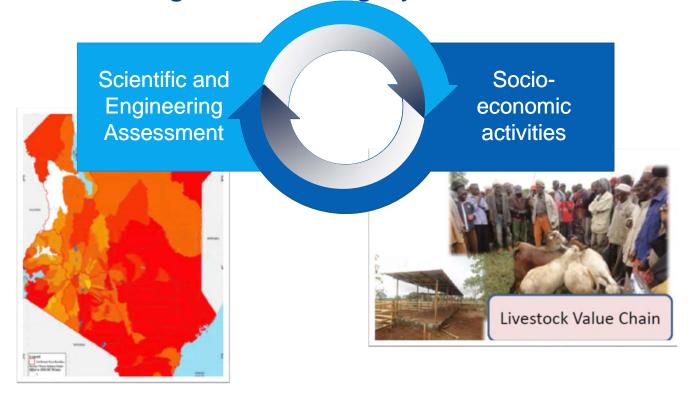


b. Enhancing Community Resilience against Drought in Northern Kenya



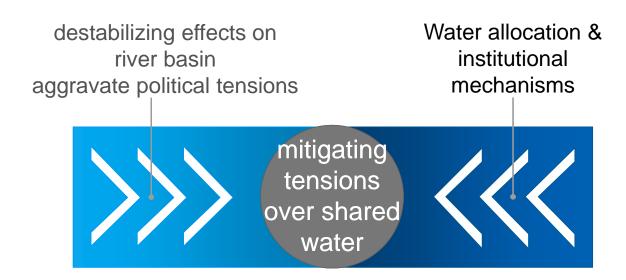


to manage climate-fragility risks



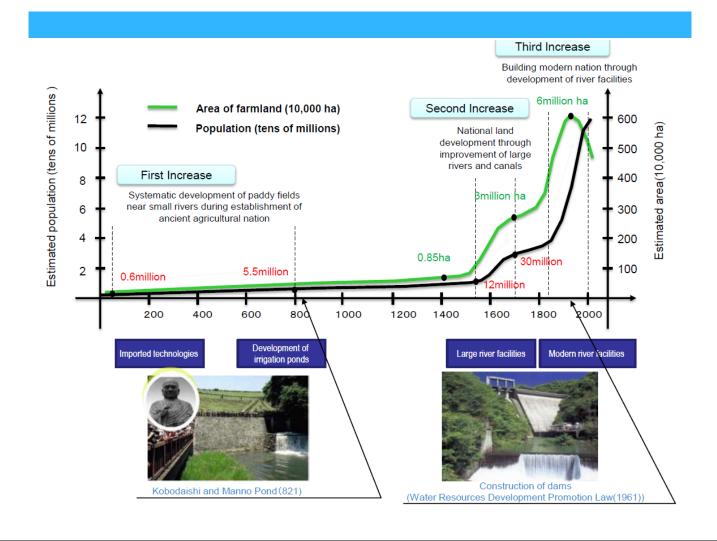
C. Capacity Development

Severer drought and floods



Japanese experience 水管理





Water Right 水利権

Customary right 1/3 慣行水利権

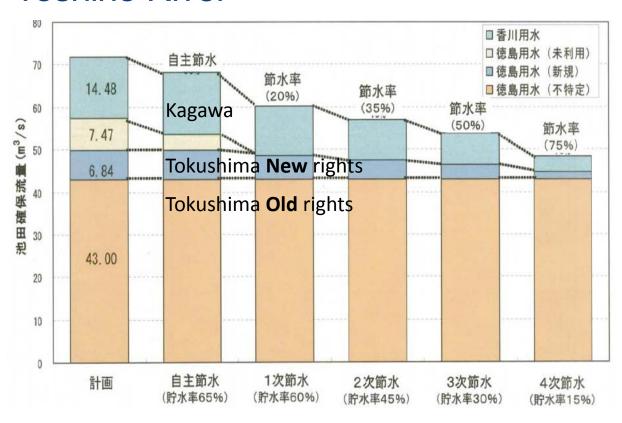
Permission right Developed by dam, weir...

2/3 許可水利権 Drought Conciliation 渇水調整 mutual-concession spirit 互譲の精神 River basin committee Water users decide restriction rules on consensus basis

River basin committee: 渴水調整会議



Yoshino River



CONCLUSION

To manage climate-fragility risks development assistance in climate change and peace building should be integrated from a long-term perspective.

