



BRIDGING GAP IN ASSESSING CLIMATE AND FRAGILITY RISKS

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Climate-fragility Risk Reduction for Development and Peace

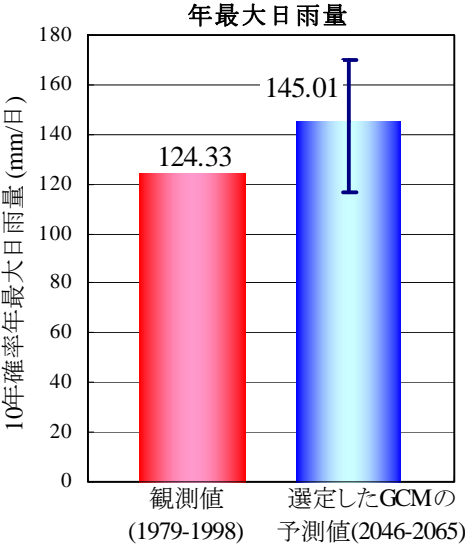
ISAP 2017, Yokohama

Implemented projects separately

Peace building



Climate change




Disaster recovery





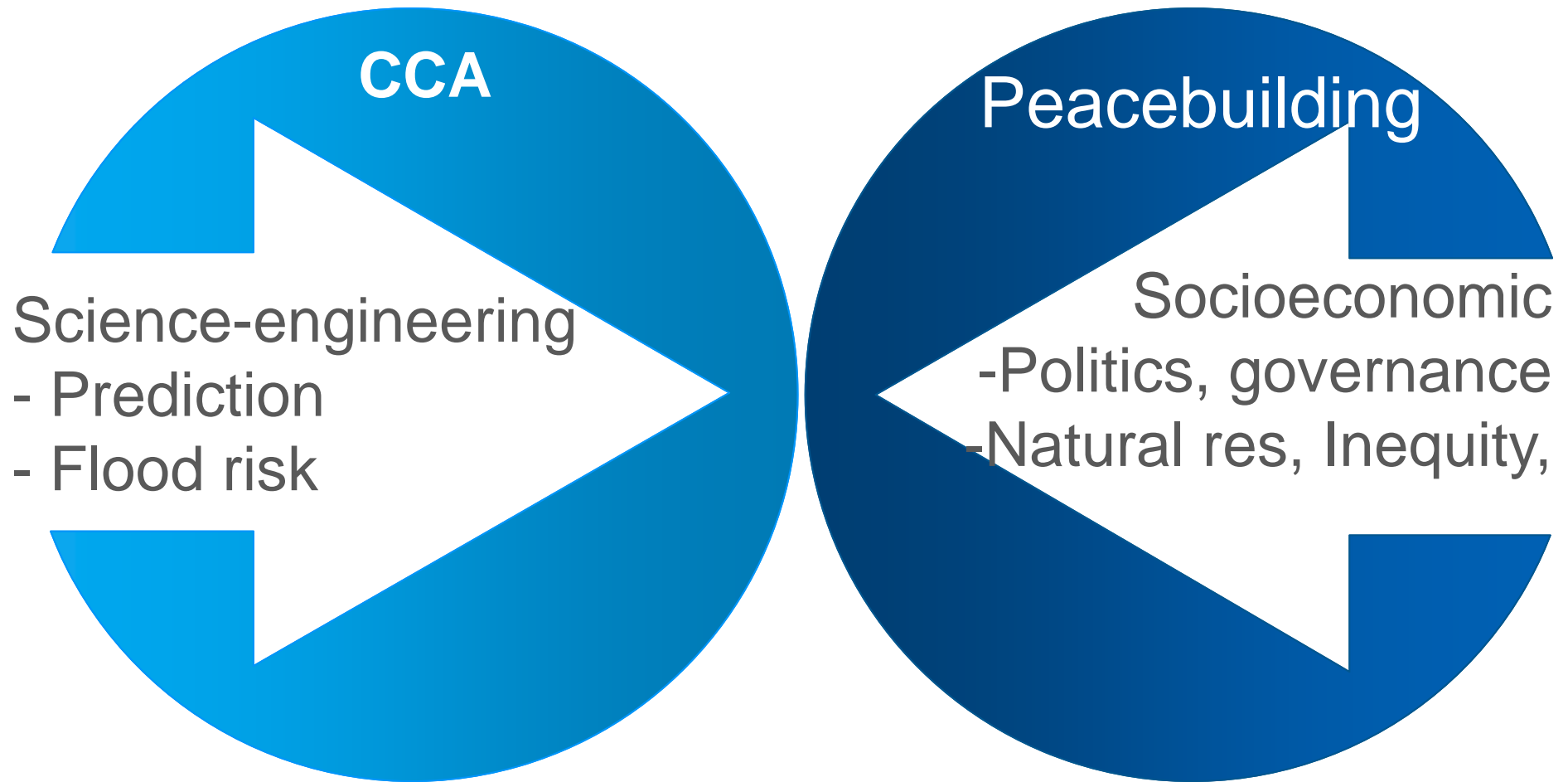
Key message

Would like to propose
assessment methods combining between climate
and fragility risks

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1. Gaps in implementing climate change adaptation and peacebuilding program
 2. Integrating assessments
 3. Case of Mindanao

1. GAPS IN IMPLEMENTING CLIMATE CHANGE ADAPTATION AND PEACEBUILDING PROGRAM

GAP 1 Risk assessment



GAP 2 Activities

CCA

Science-engineering

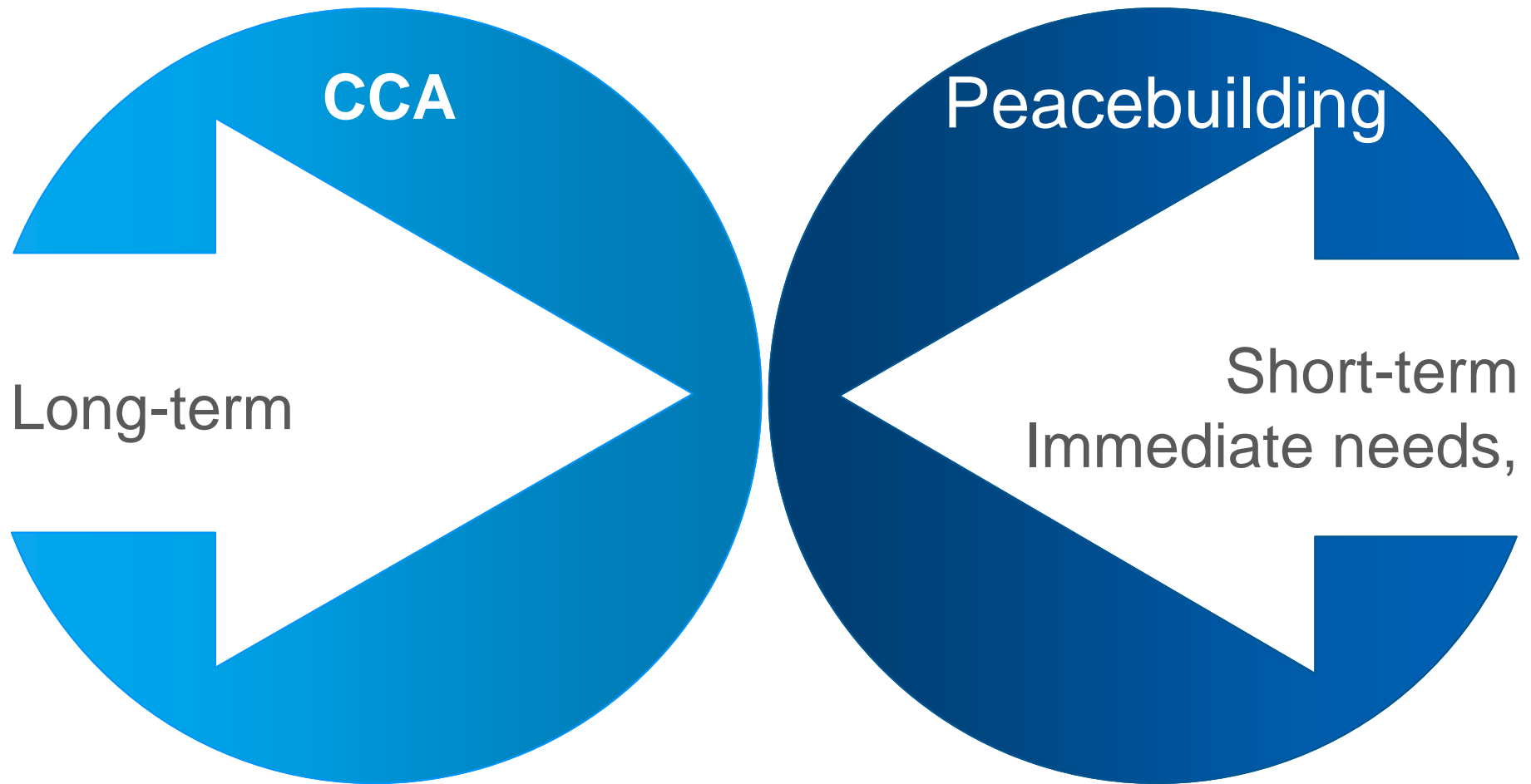
- Structures: dam, dykes
- Early warning

Peacebuilding

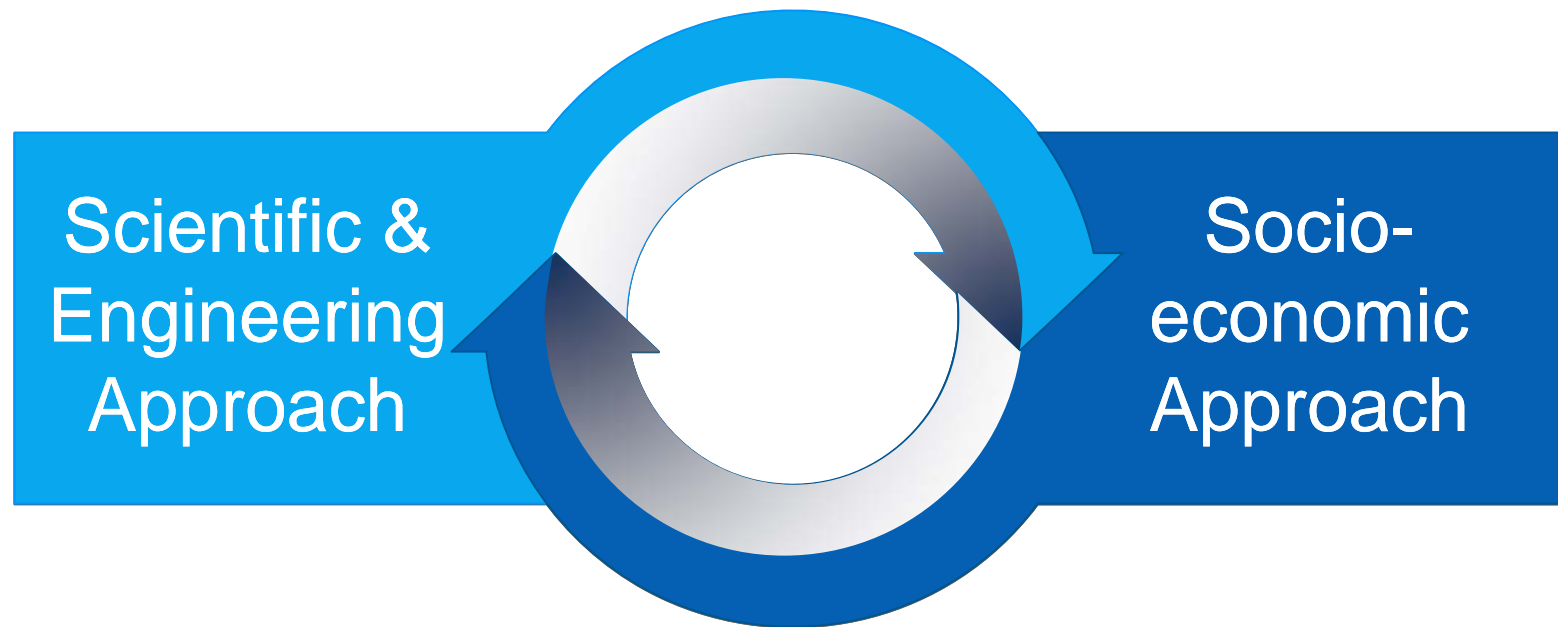
Socioeconomic

- Community based
- Livelihoods

GAP 3 Timescale



Integration in Assessment and activities



2. INTEGRATING RISK ASSESSMENTS

Climate change vulnerability analysis

Peacebuilding needs & impact assessment

Risk and sensitivity analysis

Background, politics, security analysis

Socio-economy

Capacity Assessment

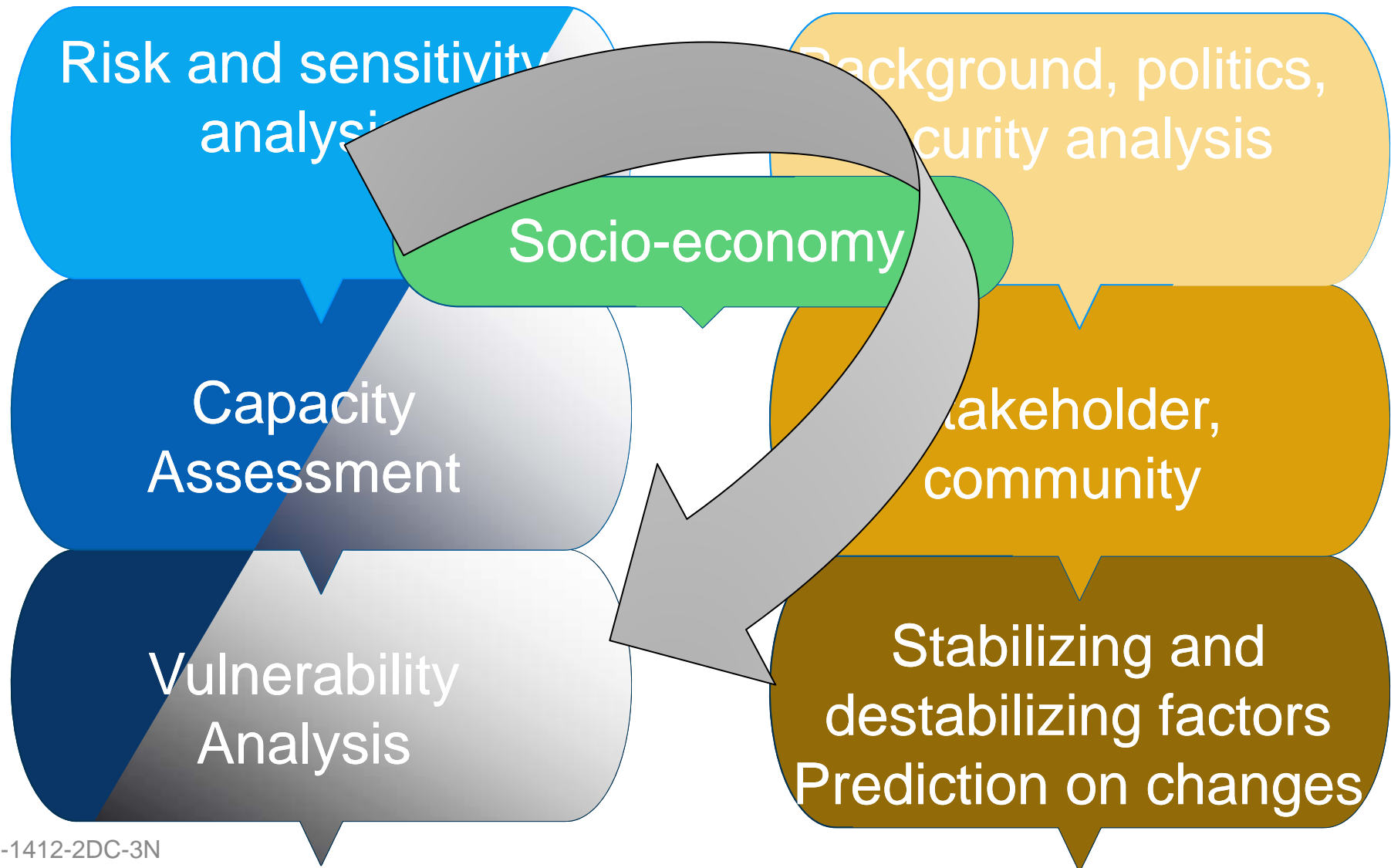
Stakeholder, community

Vulnerability Analysis

Stabilizing and destabilizing factors
Prediction on changes

Climate change vulnerability analysis

Peacebuilding needs & impact assessment



Climate change vulnerability analysis

Peacebuilding needs & impact assessment

- (i) Risk and sensitivity assessment:
a) assessing current climate risks

socio-economic situations

- backgrounds and current situation of conflicts
- Politics and security situations
- Stakeholder analysis
 - (a) characteristics of stakeholders
 - (b) relationship between stakeholders
- characteristics of communities: politics, administration, security, effects by conflicts, socio-economy
- stabilizing or destabilizing factors

Climate change vulnerability analysis

Peacebuilding needs & impact assessment

b) predicting change in climate

c) Predicting socio-economic conditions

prediction on changes and areas to be considered

(ii) Capacity assessment: assessing adaptation capacity in institutions, infrastructures, information, management, etc

(iii) Vulnerability assessment

Climate change vulnerability analysis

Peacebuilding needs & impact assessment

b) predicting change in climate

c) Predicting socio-economic conditions

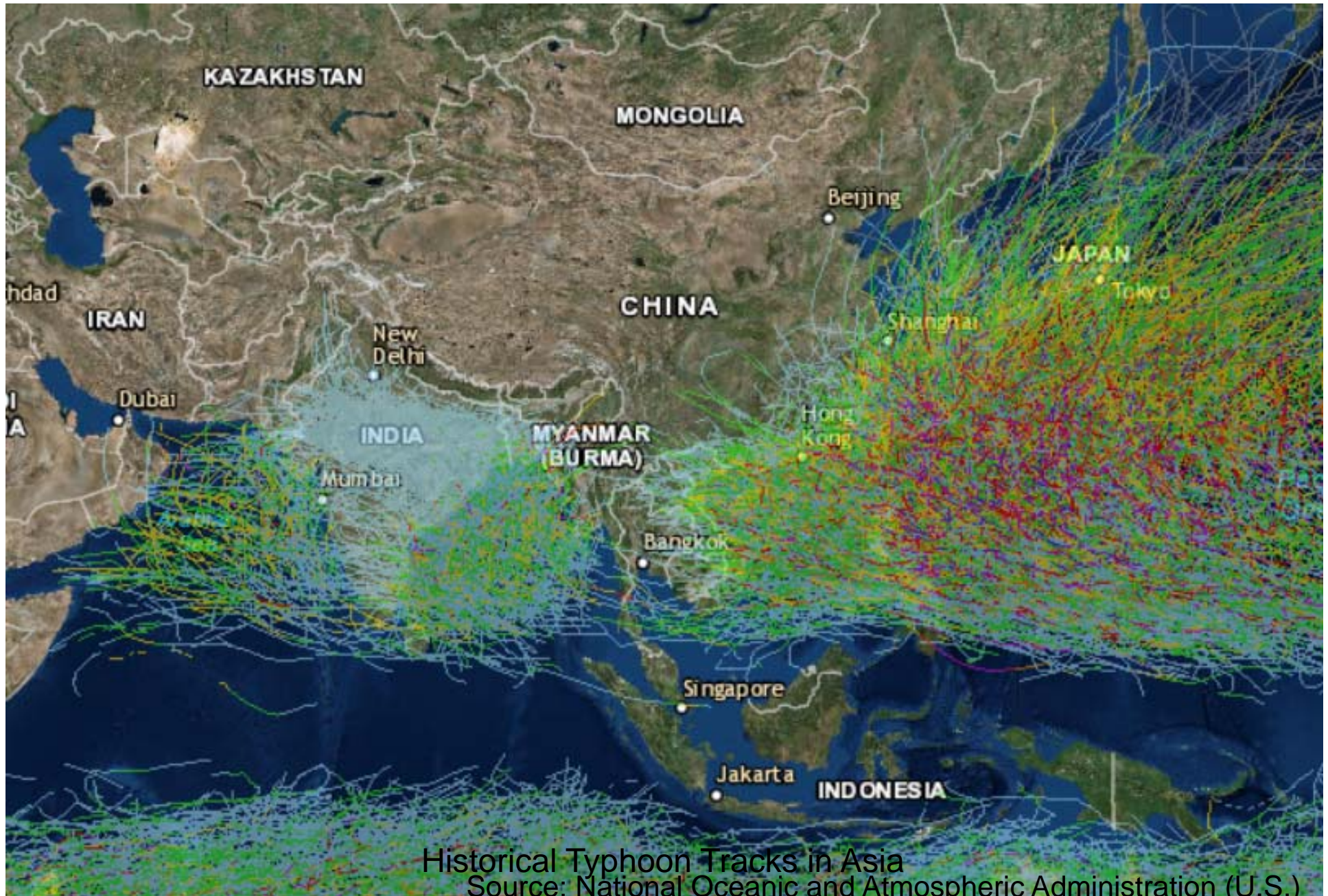
prediction on changes and areas to be considered

(ii) Capacity assessment: assessing adaptation capacity in institutions, infrastructures, information, management, etc

(iii) Vulnerability assessment

3. CASE OF MINDANAO





Historical Typhoon Tracks in Asia
Source: National Oceanic and Atmospheric Administration (U.S.)

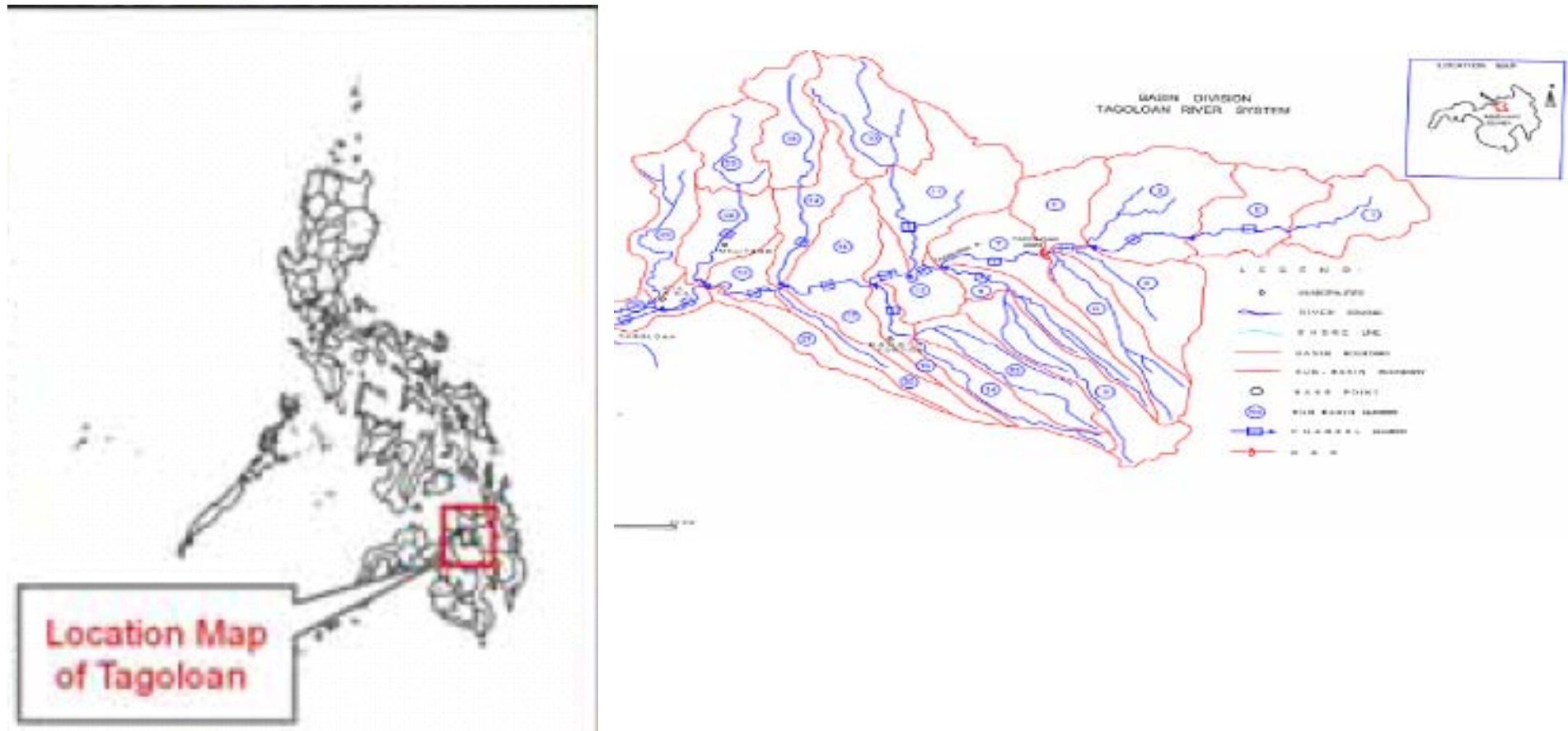


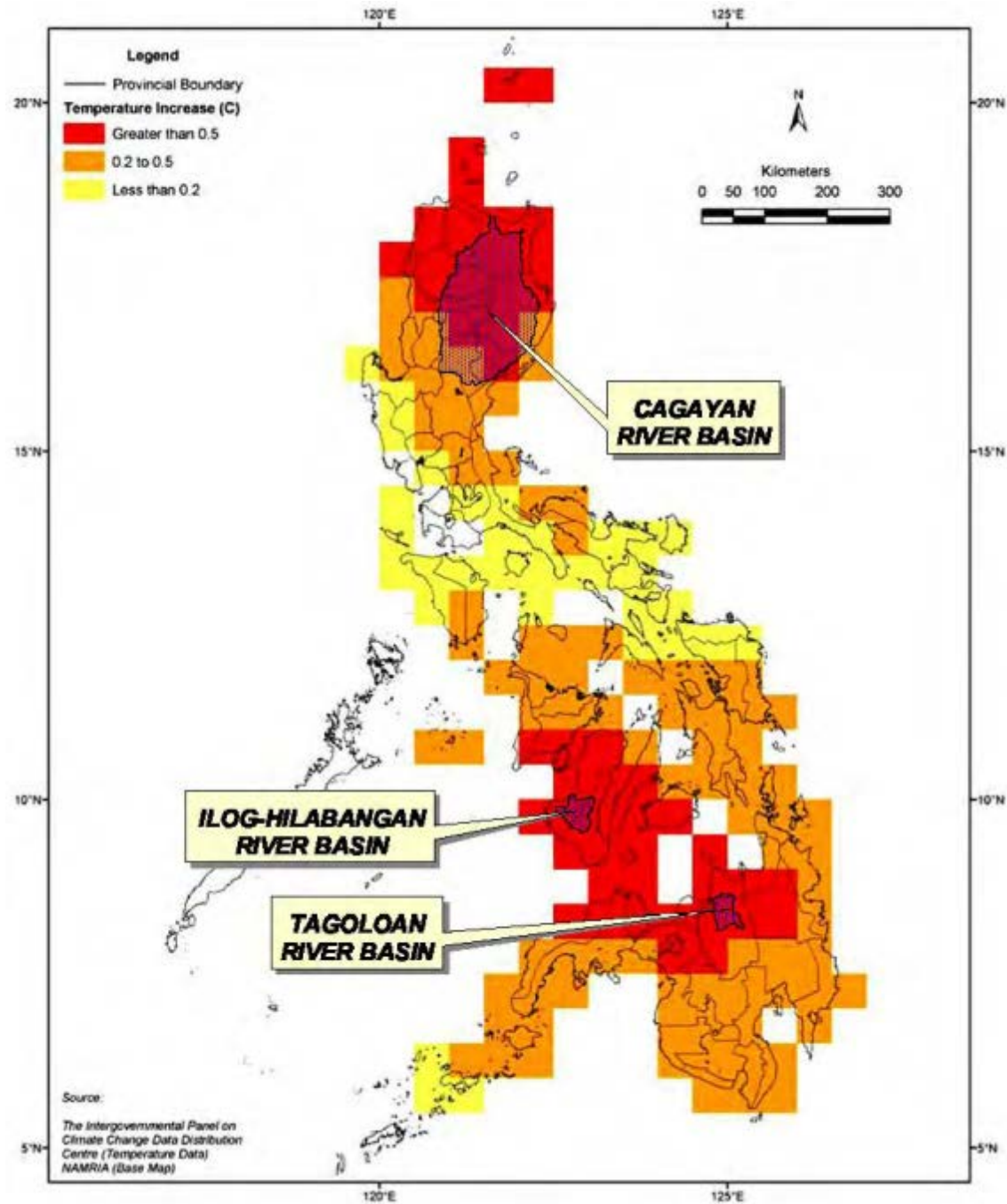
https://upload.wikimedia.org/wikipedia/commons/b/bf/Homes_destroyed_by_Typhoon_Bopha_in_Cateel%2C_Davao_Oriental.jpg

1. Climate change adaptation

Tagoloan River Basin, Mindanao, the Philippines

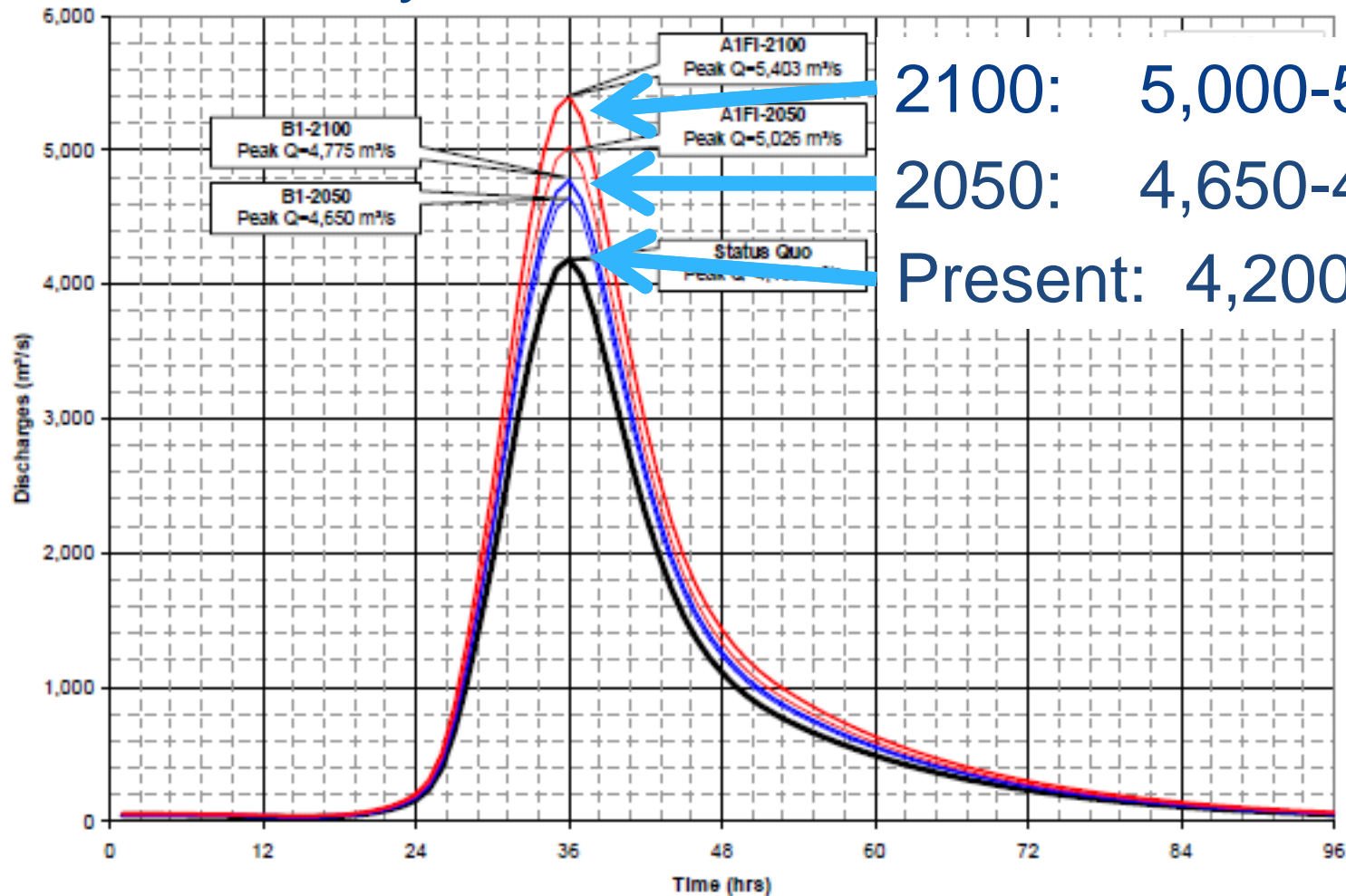
- Catchments 1,778km²
- Precipitation 1,500-2,000mm





25-yr return period

increase by 10% in 2050 and 20% in 2100

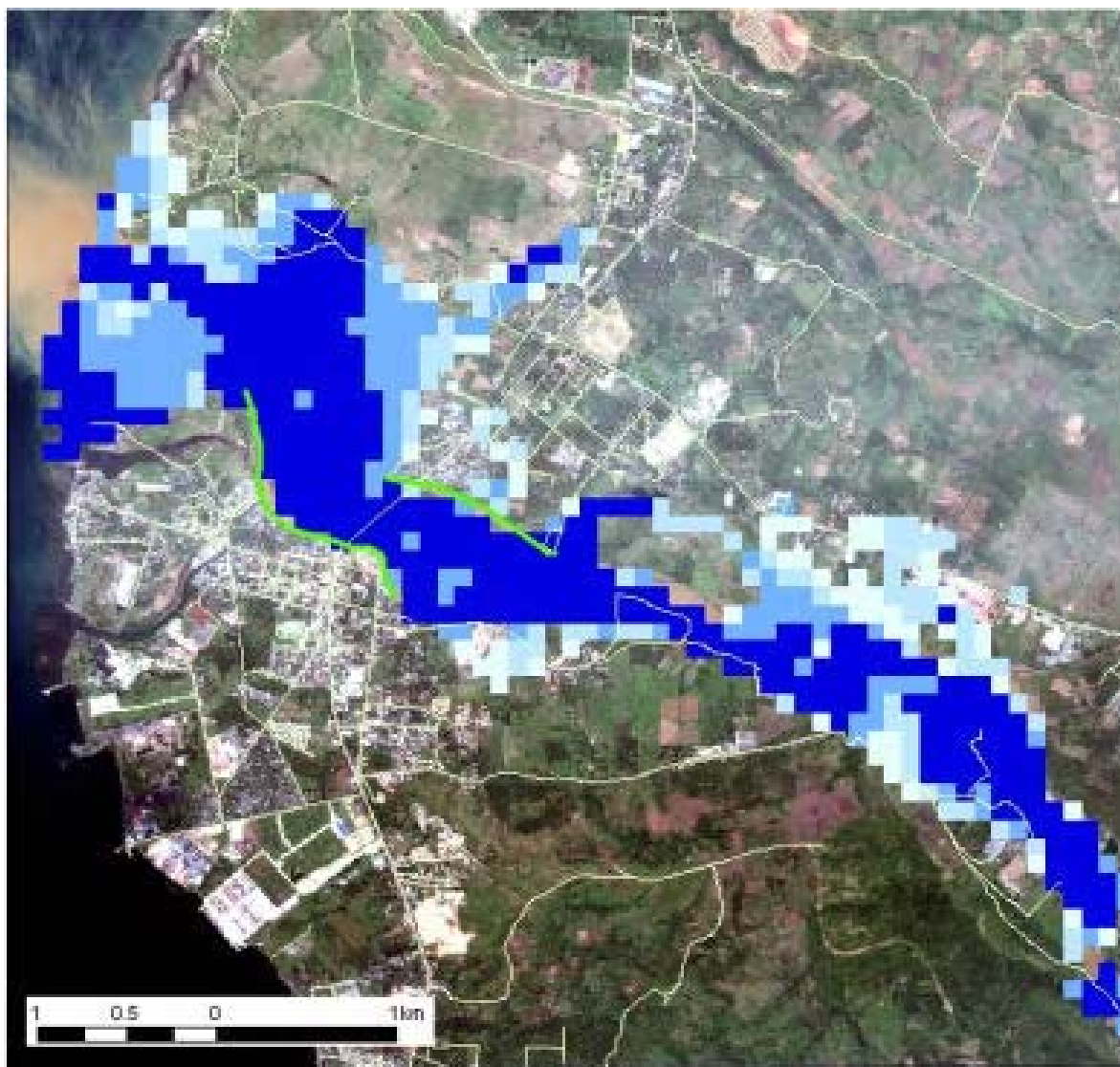


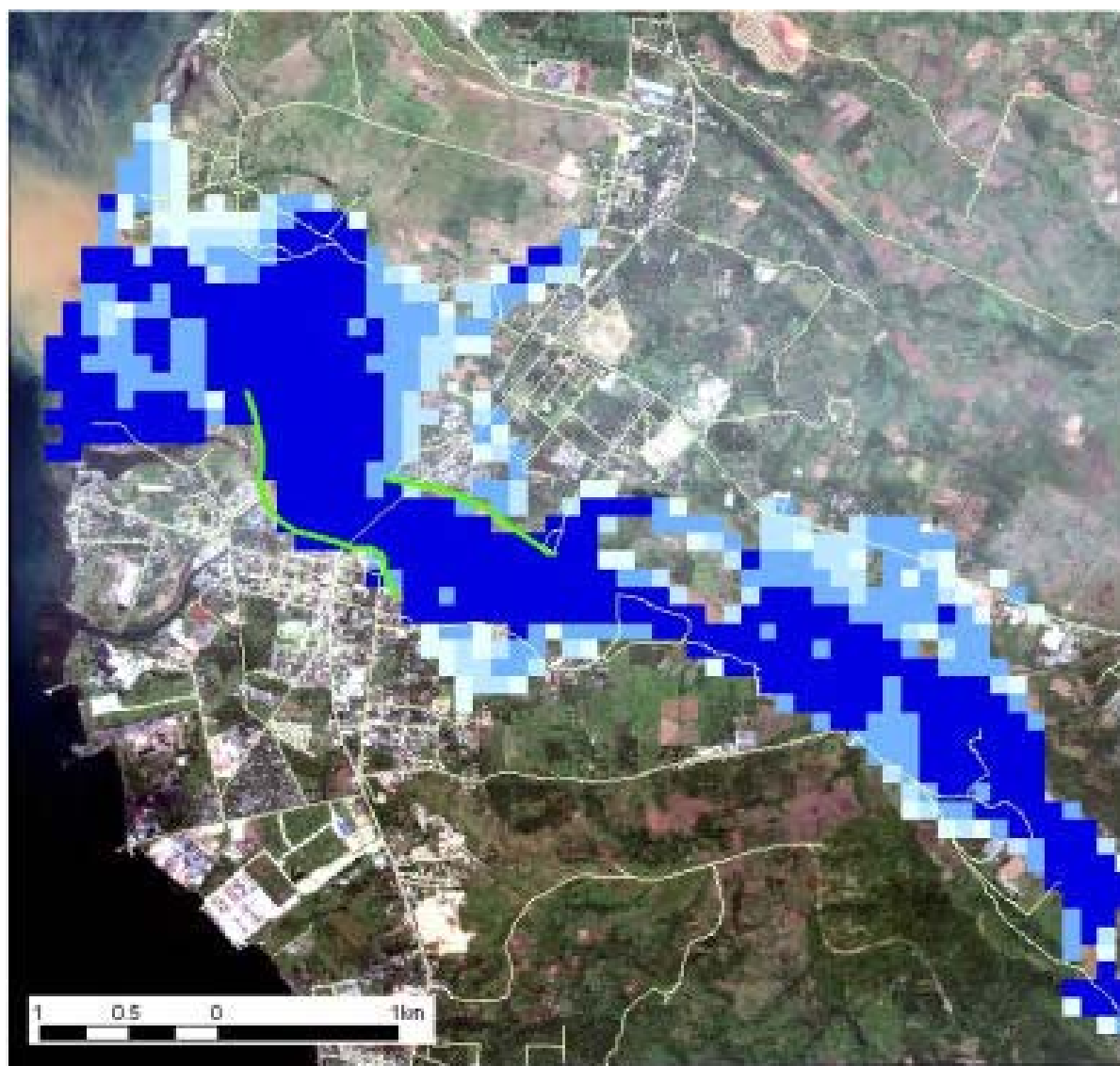
2100: 5,000-5,300 m³/s

2050: 4,650-4,800

Present: 4,200

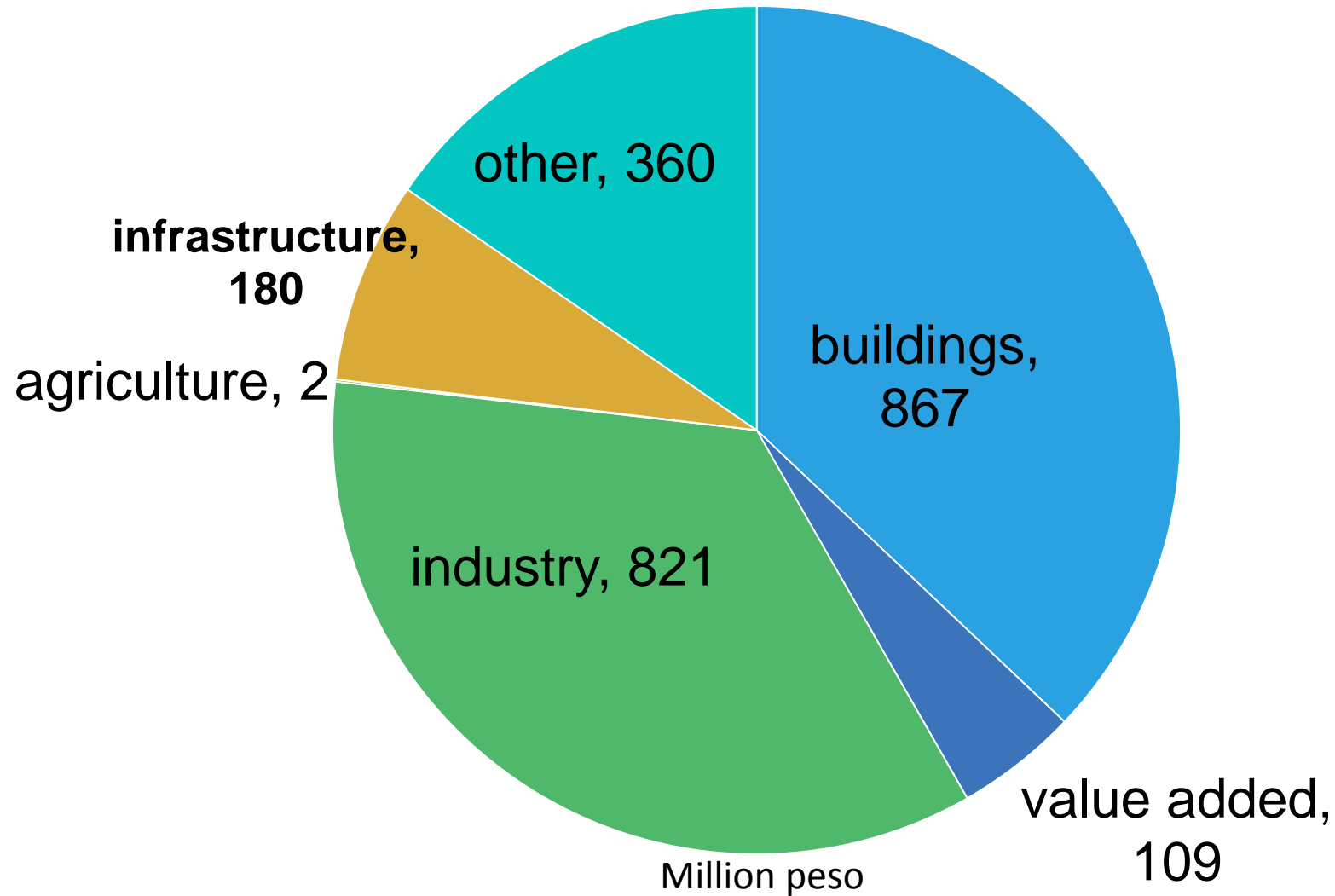
Figure R 10.16 Future 25-yr Probable Design Hydrographs





Economic damage by 1-100 yr flood

2,339 million Peso (4.6 billion Yen)





2. Peace building programs:

Peacebuilding impact and needs assessment

Factors of conflicts

among many factors: factors related to disaster damages

- Economic inequality among groups
 - High poverty ratio
 - Limited investment for infrastructure, access for resources
 - Low productivity in agriculture
- Limited capacity of government

to combine two assessments

1. Recognizing natural disasters in peace building programs
2. Recognizing fragility risks in climate change adaptation programs
3. Examining flood damage distribution among ethnic groups and religious groups in CCA program
4. Assessing capacity of disaster management in CCA and PNA

predicting change in climate

- Risk area
- Economic damage: infrastructure, houses, agriculture

socio-economic situations

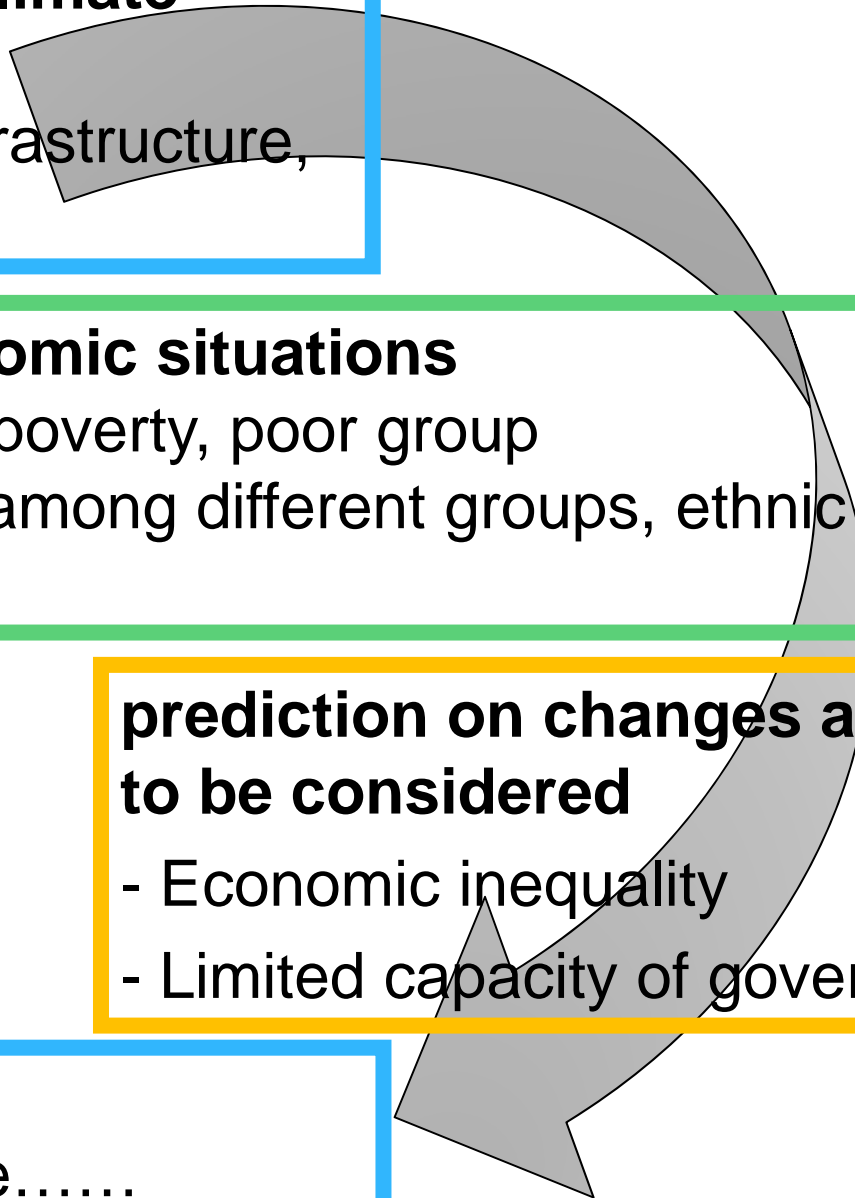
- Impact on poverty, poor group
- Inequality among different groups, ethnic & religious

prediction on changes and areas to be considered

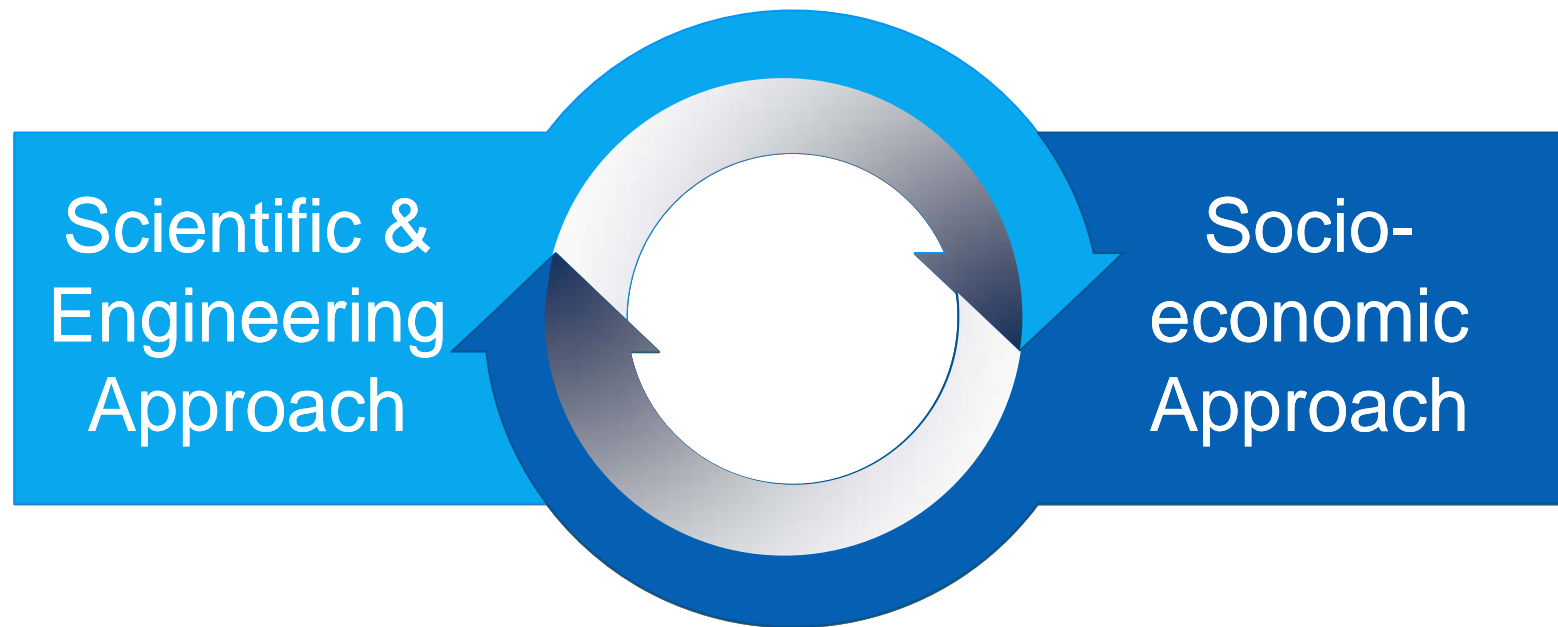
- Economic inequality
- Limited capacity of government

Capacity assessment

Institution, infrastructure.....



Integration in Assessment and activities





Key message

proposed

assessment methods combining between climate
and fragility risks



Thank you
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Silos in JICA