

**International Symposium on  
Integrated Actions for Global Water and Environmental Sustainability**  
In line with the Commemoration of the 70th Anniversary of UNESCO



21-22 October 2015, Medan, Indonesia

**International Flood Initiative (IFI) and  
International Drought Initiative (IDI)**

## Implementation Now! How to Address?

Learn from and support to national and local platforms to practice evidence-based flood and drought risk reduction.

- Considering how to share best practice eg. WWF7 Implementation Road Map.
- Monitoring
  - Activities, progress, achievements
- Data Collection & Sharing, Statistics
- Risk Monitoring
- Early Warning and Risk Assessment
- Financing mechanism
- Capacity Building

Mobilize existing networks of scientific and research institutions, at national, regional and international levels.

- Synthesis
- Advice to Stakeholders
- Communication and Engagement

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# Second UN Special Thematic Session on Water and Disasters



9:30-17:50

Wednesday, November 18, 2015

The UN Headquarters, New York

## Organizers

UN Secretary-General  
co-organized by  
UN Secretary-Generals'  
Special Envoy on Disaster  
Risk Reduction and Water  
and High-level Experts and  
Leaders Panel on Water  
and Disasters (HELP)



## Science and Technology to Advance DRR on Water



# Key Directions and Actions

## Key Direction 1:

### Improve data collection, sharing, integration and dissemination

#### Suggested Actions

- Support countries to collect damage data and maintain disaster statistics.
- Develop methodologies for measuring flood and drought risk and resilience based on improved understanding of disaster mechanisms and socio-economic characteristics.
- Enhance real-time data availability for early warning.
- Promote coordinated and sustained satellite observations: rainfall(PR), flooding area (SAR), drought index (MR)
- Enhance data integration and analysis capability.

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# Key Directions and Actions

## Key Direction 2:

**Advance inter-disciplinary and trans-disciplinary research on flood and drought risk reduction**

## Suggested Actions

- Promote dialogue among stakeholders, share needs and co-design collaborative research plans.
- Enhance collaboration between natural science and socio-economic science communities by taking advantage of data integration and analysis infrastructure for assessing risk and resilience.
- Co-produce evidence-based actionable information and knowledge for reducing flood and drought risk and building resilience.

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- **Co-produce** evidence-based actionable information and knowledge for reducing flood and drought risk and building resilience.



# Key Directions and Actions

## Key Direction 3:

**Promote regional cooperation by mobilizing existing international initiatives for supporting local/national efforts.**

## Suggested Actions

- Promote dialogue among representatives of administrative, civil and scientific communities, UN agencies, regional development banks and private sectors.
- Develop regional cooperative frameworks on flood and drought and make implementation plans for demonstration and/or prototyping of regional flood and drought monitoring and early warning support system.
- Share good practices of evidence-based flood and drought risk reduction.

# Key Directions and Actions

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# Asia Water Cycle Symposium (AWCS2016)

1-2 March 2016, Tokyo, Japan



161 participants from 20 countries  
and 4 UN organizations

Integrated Water Resources Management (IWRM)

## Integrated Flood Management (IFM)

**Minimizing**  
social, environmental and economic risks

**Maximizing**  
net benefits from the use of flood plains

Sendai framework  
SDGs  
UNCCC COP21

### IFI implementation steps

climate change, changes in anthropogenic activities

inter-disciplinary, trans-sectoral and basin-wide approaches

#### Understanding of current status

- magnitude of flood hazards
- impact of development  
(changes in exposure, vulnerability)
- shortage of resources
- shortage of political will

#### Planning

- stakeholder participation
- cultural diversity
- impact & cost/benefit assessment
- decision making

#### Implementation

- early warning systems
- land use management
- effective infrastructure development
- increasing people's awareness
- institutional frameworks
- building back better

#### Follow-up

- risk re-analysis
- clarifying problems
- identifying areas to be strengthened

### IFI supporting tools

#### database

(statistics of flood damages/benefits and flood management knowledge)

#### science & technology

(monitoring technology, simulation tools, risk assessment methodology, clear indices)

#### local, national, regional initiatives

(IFI-AP, IFI-LAC etc.)

#### capacity building

(training courses)

#### financial mechanisms

(economic analysis tools and methods)

### Focus Areas

Monitoring

Hazard Assessment

Exposure Assessment

Vulnerability assessment and capacity building

Finance and investment

### Expected Stakeholders

IFI promoters  
(International organizations etc.)

Academic Society  
(universities, research institutes etc.)

Government  
(water, disaster etc.)

Funding Agencies  
(ODAs, Banks, UN etc.)

DB operational supporters

Project investors & owners

- Analyzing and formulating policies
- Visualizing values of preparedness and investment efficiency

**Support in Sound Policy-making**

- Improving disaster literacy
- Promoting co-design and co-implementation among stakeholders

**Support in Community of Practice**

**Risk Assessment**

**Risk Change Identification**

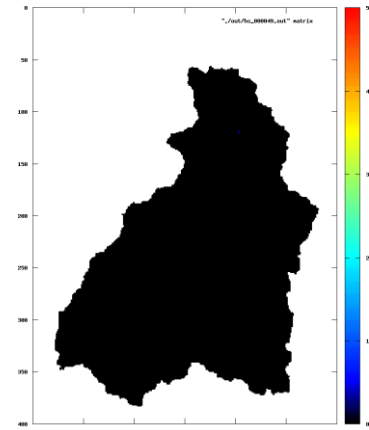
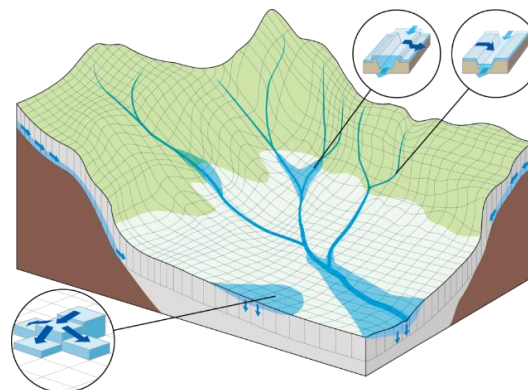
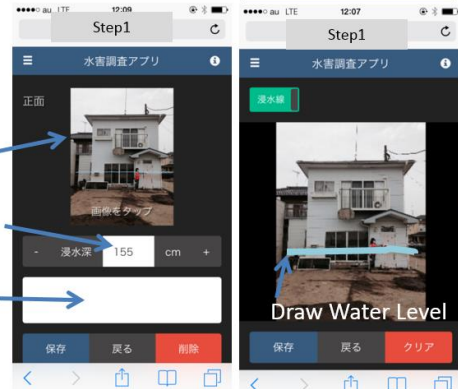
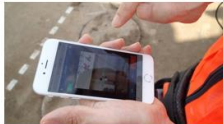
**Data & Statistics**

- Developing integrated disaster risk assessment
- Identifying locality and commonality

- Monitoring and predicting changes in disaster risk
- Identifying locality and commonality

- Promoting data collection, storage, sharing, and statistics
- Integrating local data, satellite observations and model outputs



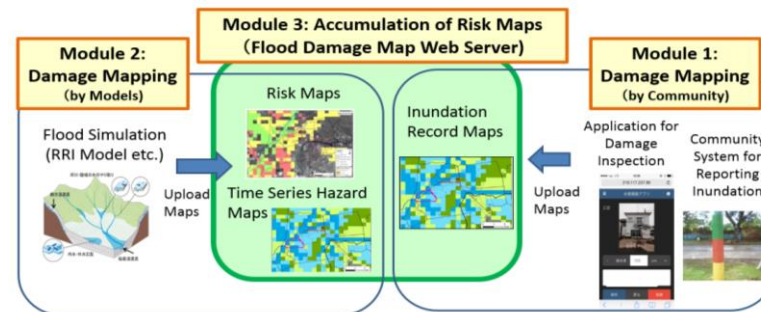


Upload Building Photo

Input Water Level(cm)

Input some comments on damage

Unload Button



systematic  
+participatory  
+accountability

linkage  
with line-agencies

Support in  
Sound Policy-making

Support in  
Community of Practice

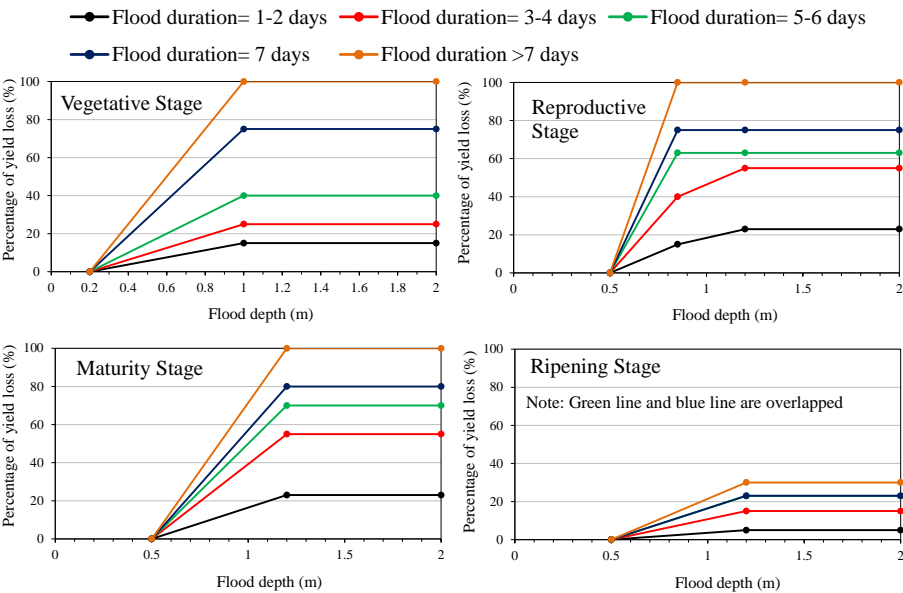
Risk Assessment

Risk Change  
Identification

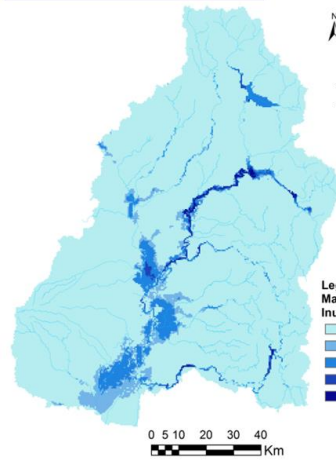
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# Crop Damage Function

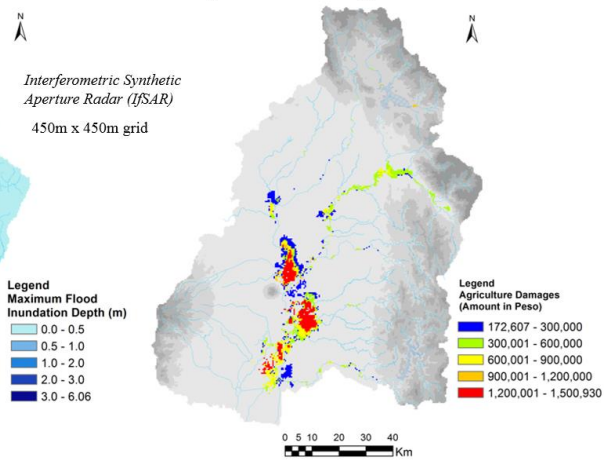


September 2011 Flood



Flooded areas (>0.5m depth)= 45,056.25 ha

Depths\*Damage Function



**Damages: 1,475.78 million Peso**

Rice Yield = 4360 kg/ha  
Farm gate price of rice = 17 Peso/kg

Support in  
Sound Policy-making

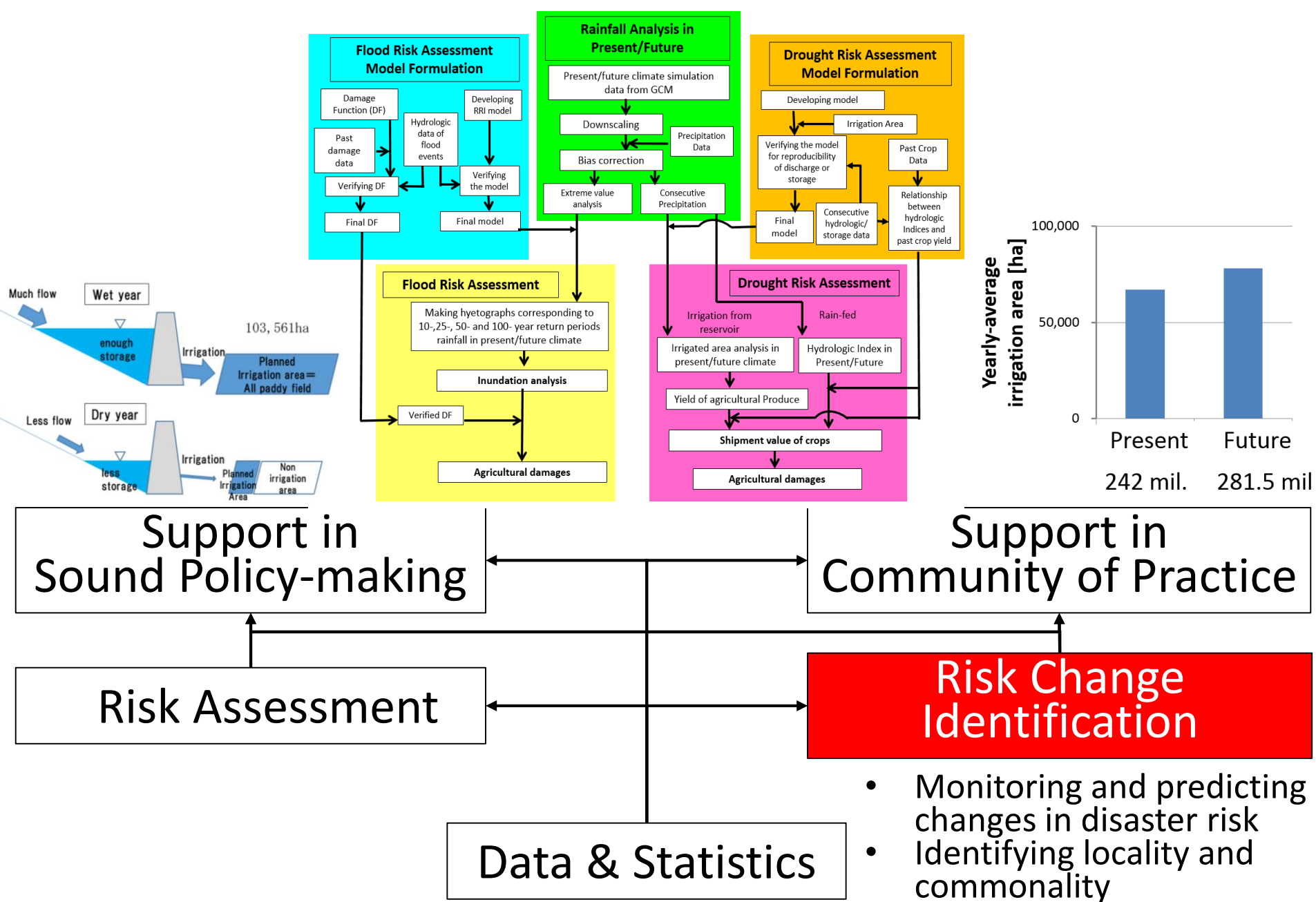
Support in  
Community of Practice

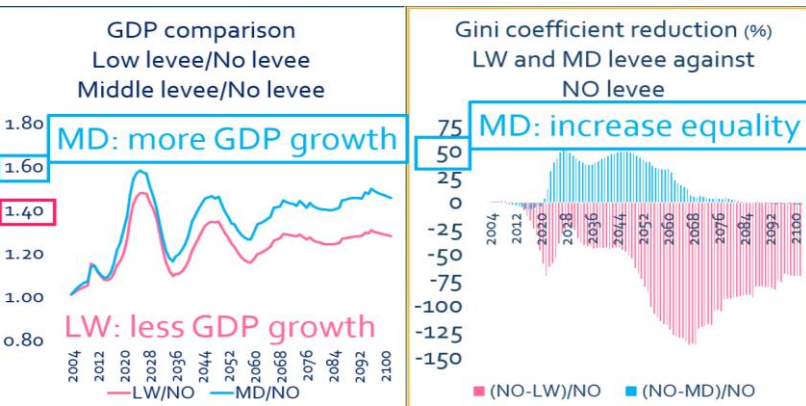
**Risk Assessment**

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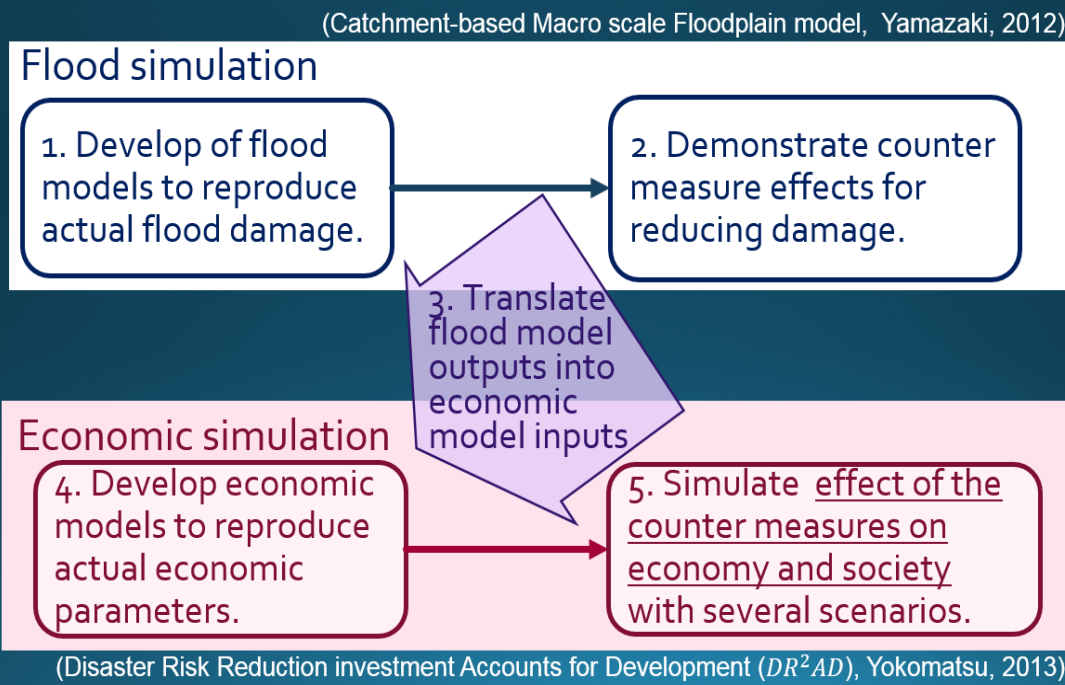
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- Analyzing and formulating policies
- Visualizing values of preparedness and investment efficiency



**Support in Sound Policy-making**

**Support in Community of Practice**

**Risk Assessment**

**Risk Change Identification**

**Data & Statistics**



		Barangay Sta. Lucia			
		(Legend)			
		less than 3% (0.0304m)		less than 4% (0.1218m)	
		less than 4% (0.1218m)		more than 4% (0.1218m)	
		Inundation depth (m)			
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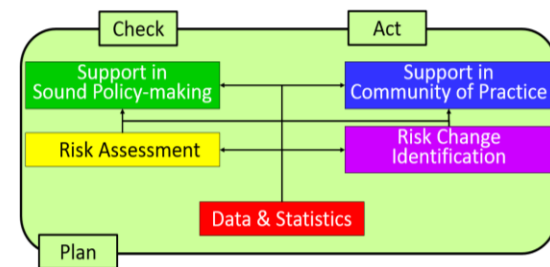
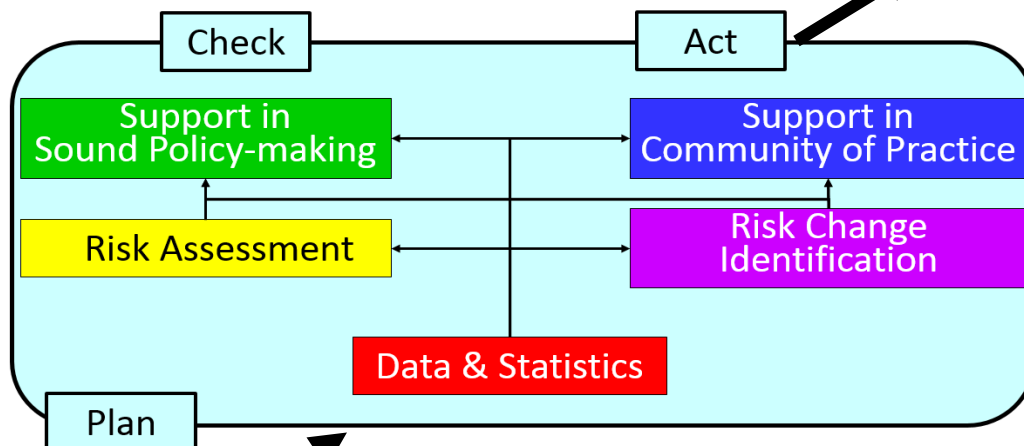
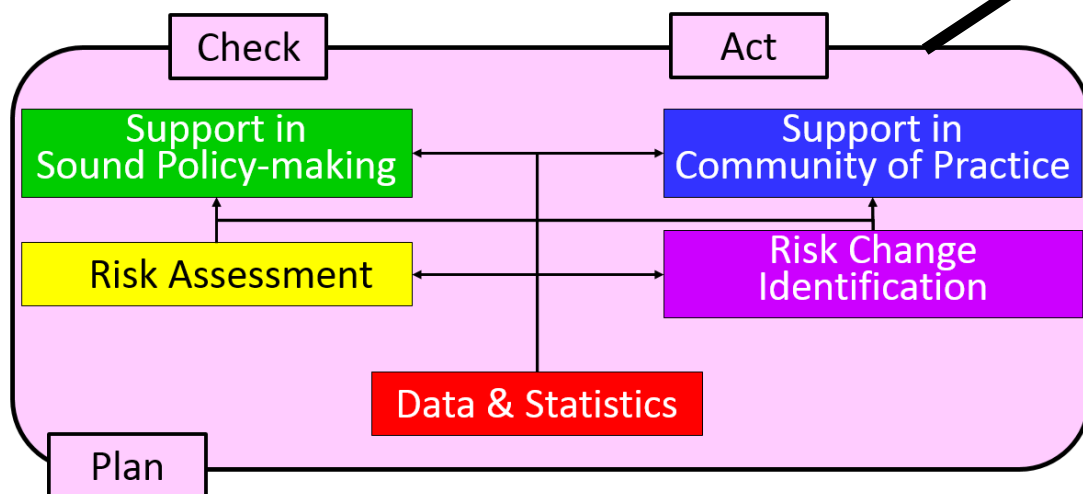


# Spiral-up Development

Demonstration → Prototyping → Operation

## Regional coordination framework

- Commonality & Priority
- Sharing knowledge, best practices
- Strengthening capability of observations, assessments and management
- Establishing a forum for promoting dialogue at all level



## National coordination framework

- Locality
- Institutional arrangements
- Observations & data integration
- Natural & Socio-economic collaboration
- Communities of Practice