

ADBI-ICHARM Policy Dialogue on Water-related Disaster Resilience Under Climate Change

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“Initiatives and efforts for strengthening governance and investment for water-related disaster resilience under climate change in Asia”

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RESILIENCE TO WATER-RELATED DISASTERS AND CLIMATE CHANGE

RESILIENCE

- Capacity of a system, community or society (exposed to hazards) to adapt.
- Adaptive capacity / ability of a system to adjust to
 - climate change / potential damages
 - Water-related hazards and disasters

... take advantage of opportunities and cope with consequences

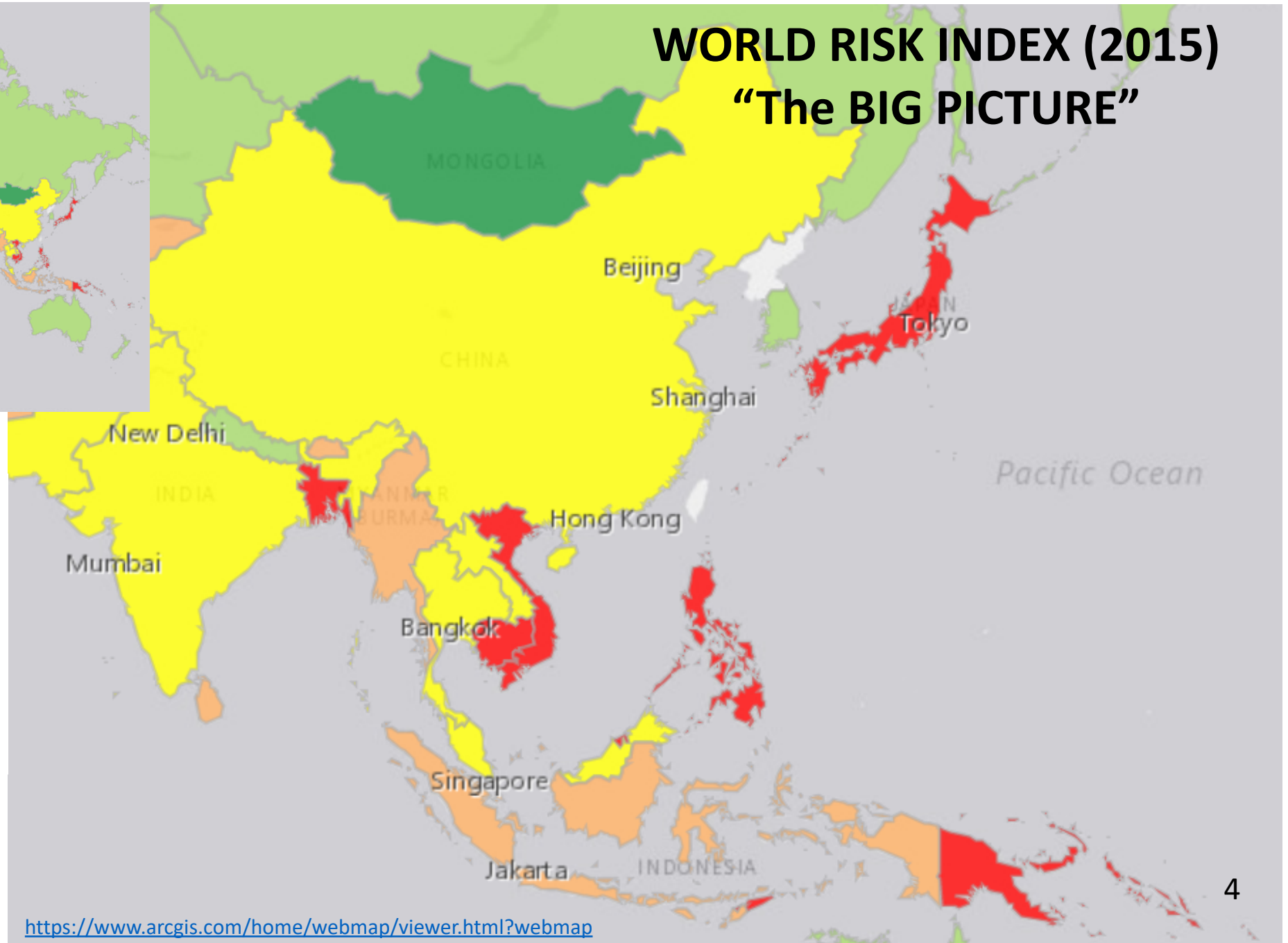
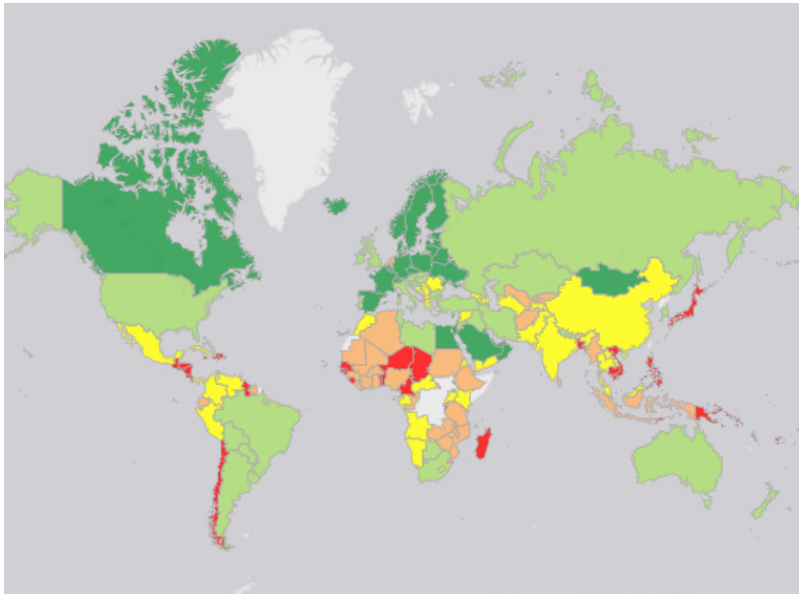
“Water-related hazards and disasters”

- *results of complex interactions in the ocean atmosphere-land process cascade.(UNESCO)*

FACTORS:

- Increased event and frequency and magnitude
- Unplanned urbanization
- Degradation of ecosystem services
- Vulnerable livelihoods
- Inaccurate public perception of risk

WORLD RISK INDEX (2015) "The BIG PICTURE"



- 10.40-36.72 very high
- 7.31-10.39 high
- 5.47-7.30 medium

- 3.47-5.46 low
- 0.08-3.46 very low
- no data

WORLD RISK INDEX (2011)

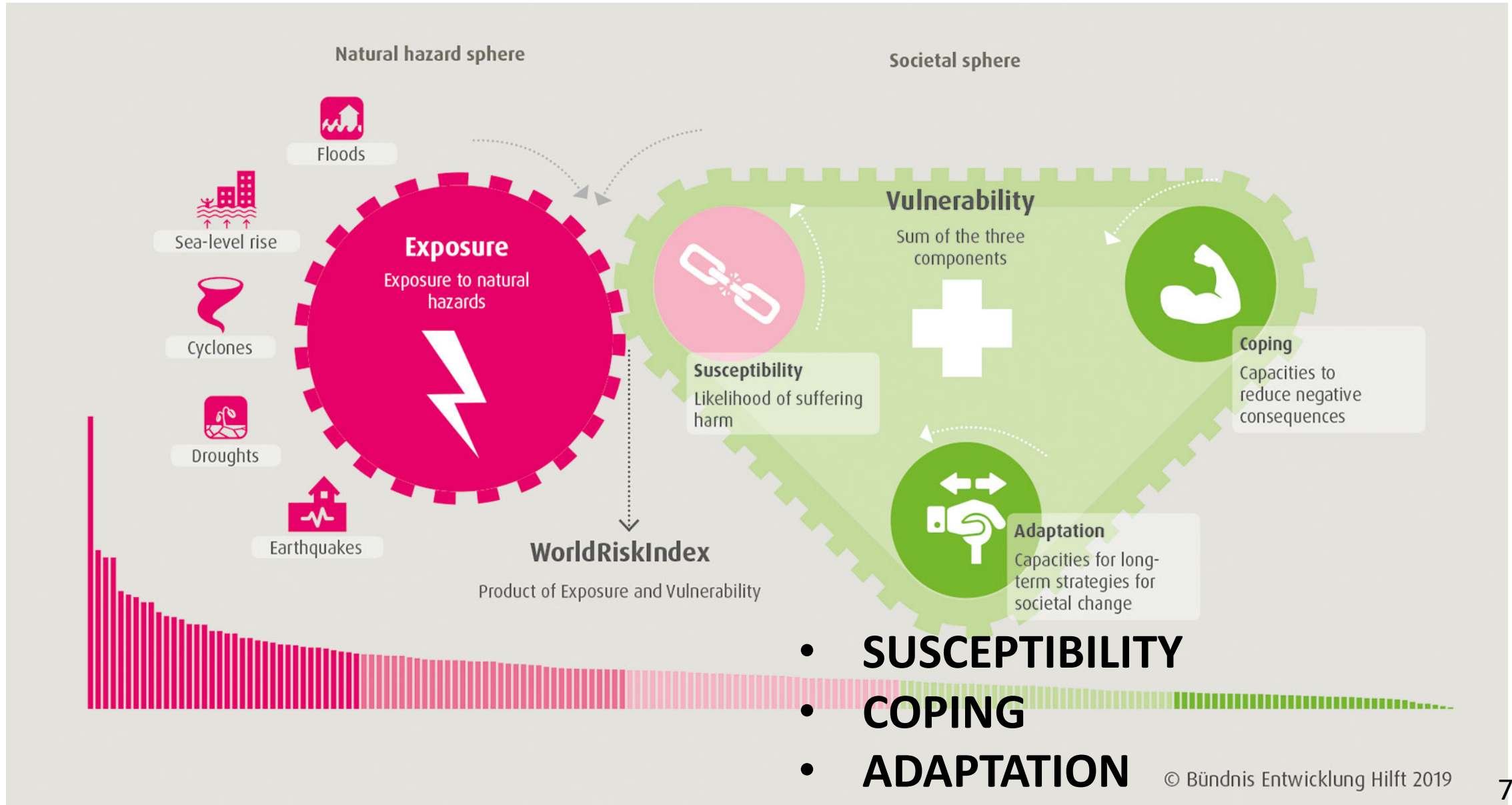
RANK/COUNTRY	INDEX (%)
1. Vanuatu	32.00
2. Tonga	29.08
3. Philippines	24.32
4. Guatemala	20.88
5. Solomon Islands	23.51
6. Bangladesh	17.45
7. Costa Rica	16.74
8. Cambodia	16.58
9. Papua New Guinea	-
10. El Salvador	16.49

WORLD RISK INDEX (2015)

RANK/COUNTRY	INDEX (%)
1. Vanuatu	36.72
2. Tonga	28.45
3. Philippines	27.98
4. Solomon Islands	19.29
5. Guatemala	20.10
6. Bangladesh	19.26
7. Timor-Leste	16.23
8. Costa Rica	17.17
9. Cambodia	16.82
10. El Salvador	16.80

Source: IRDR

<http://www.irdrinternational.org/2016/03/01/world-risk-index/>



- **SUSCEPTIBILITY**
- **COPING**
- **ADAPTATION**

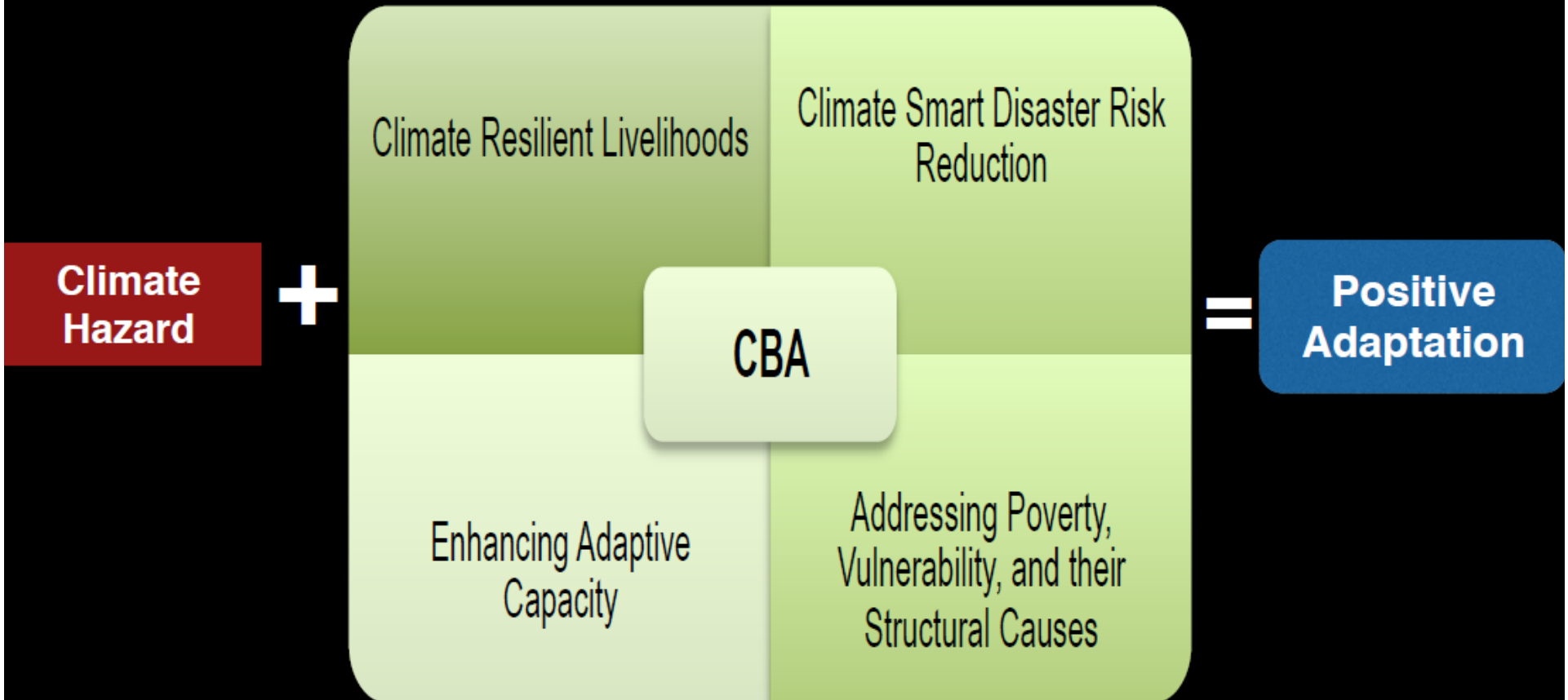
ADAPTATION/ ADAPTIVE CAPACITY...

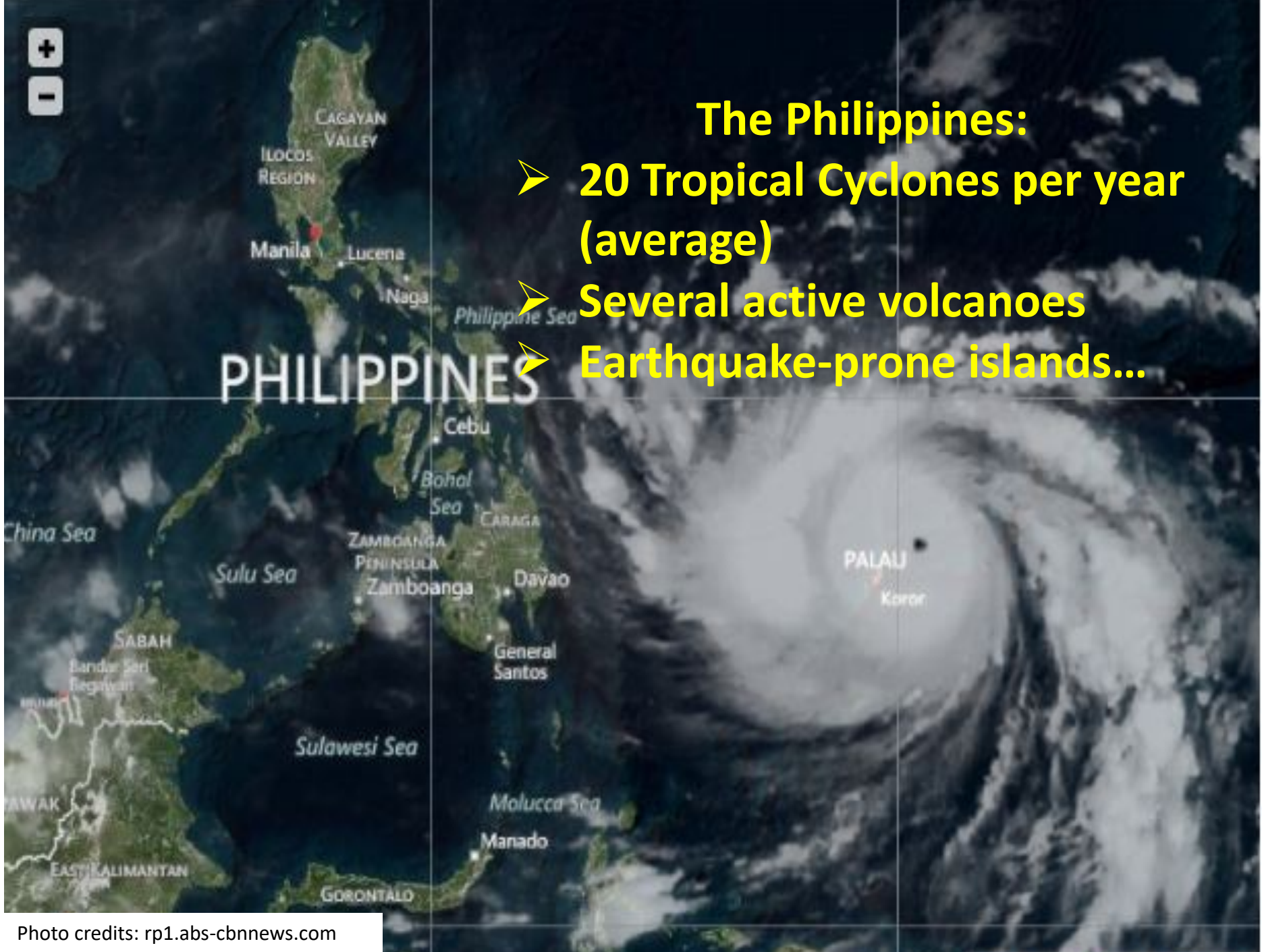
COMMUNITY-BASED ADAPTATION (CBA) TO CLIMATE CHANGE



COMMUNITY-BASED
ADAPTATION
TO CLIMATE CHANGE

CBA Component Features





The Philippines:

- 20 Tropical Cyclones per year (average)
- Several active volcanoes
- Earthquake-prone islands...

CBA in Early Warning System... CBFEWS **The Community-based Concept**

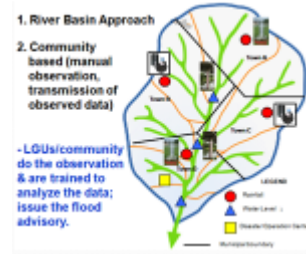


Activities in the establishment of CBFEWS

1. Consultation meeting with Local Government Units (LGUs)



2. Site survey and ocular inspection



3. Installation of monitoring facilities, flood signages and hydrographic surveys



5. Seminar on data observation/ operationalization/retraining



6. Special IEC and flood drill/dry run



7. Turn over of CBFEWS to LGUs



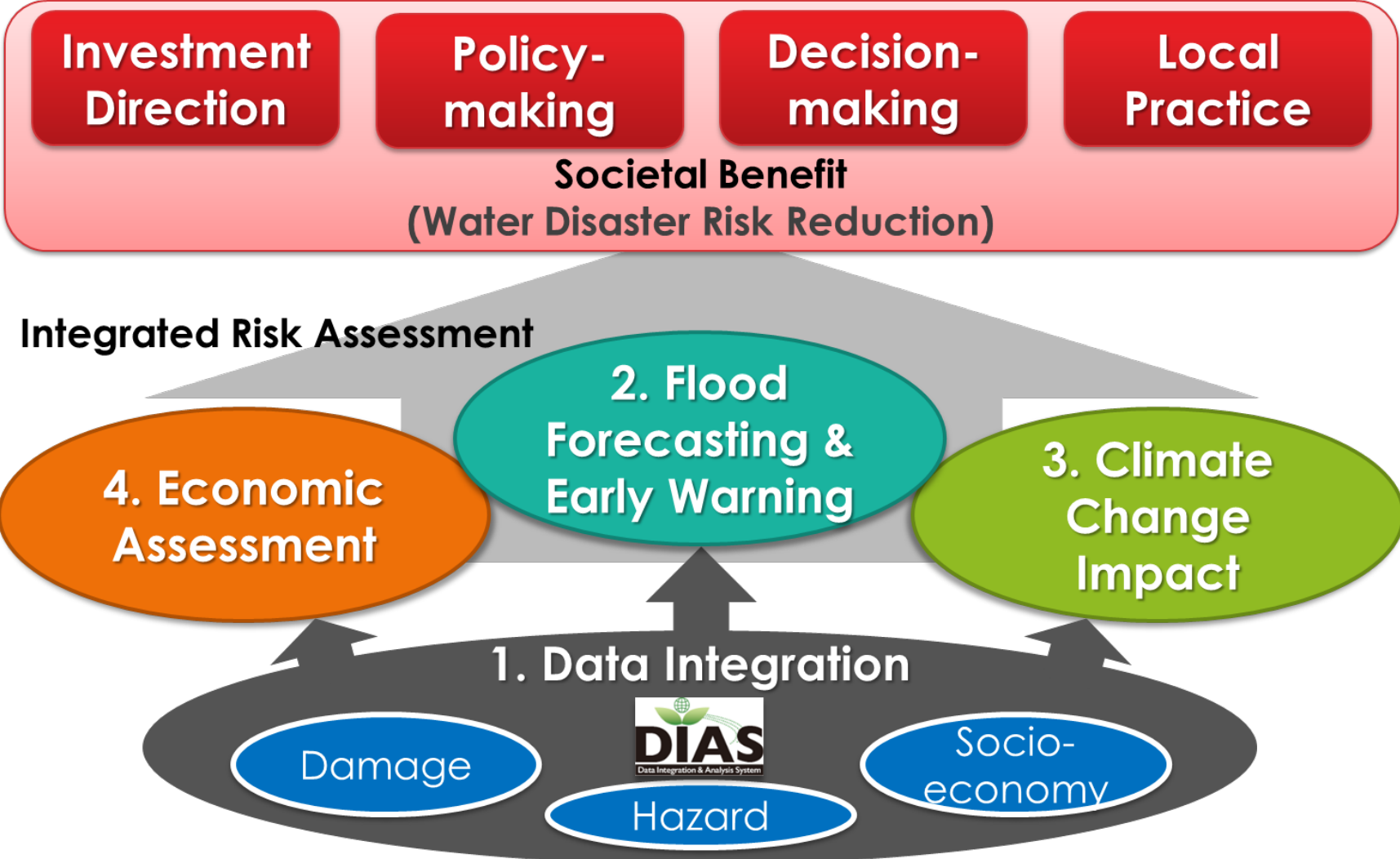
CBA IN AGRICULTURE...

Hazard and Climate Change Scenarios	Strategies	Adaptation Options
Seasonal variability, weather and heat intensities	<ul style="list-style-type: none"> • Use different crops, different farming methods 	<ul style="list-style-type: none"> • New crop varieties and farming methods
Increase storm intensity, increases in annual rainfall variability, increases in wind intensities	<ul style="list-style-type: none"> • Change land topography to improve water uptake and reduce wind erosion 	<ul style="list-style-type: none"> • Subdivide large fields • Maintain grasses around water ways • Roughen land to increase water absorption • Build windbreaks to reduce wind erosion
Decrease in annual rainfall, increases in wind intensities	<ul style="list-style-type: none"> • Improve water use and availability, and control erosion 	<ul style="list-style-type: none"> • Line canals with plastic films • Where possible, use brackish water • Use drip irrigation or other water saving technologies

CBA IN AGRICULTURE...

Hazard and Climate Change Scenarios	Strategies	Adaptation Options
Decrease in annual rainfall and increase in rainfall storm intensities	<ul style="list-style-type: none">• Change farming practice to conserve soil moisture and nutrients• reduce run-off	<ul style="list-style-type: none">• Blend in mulch stubble and straw in soils• Practice crop rotation and avoid mono cropping• Use lower planting densities
Variable seasonality	<ul style="list-style-type: none">• Change the time of farm operations	<ul style="list-style-type: none">• Advanced planting dates to offset moisture stress during warm periods

National Support to platform activities... *To increase Resilience and Adaptive Capacities of Communities*



Salamat po!
Thank you!