

**Unknown Value of Inamura Fire,
Sprit of Hamaguchi leads 160 years future UN initiative
"Sendai Framework for DRR".**

19 Dec. 2018

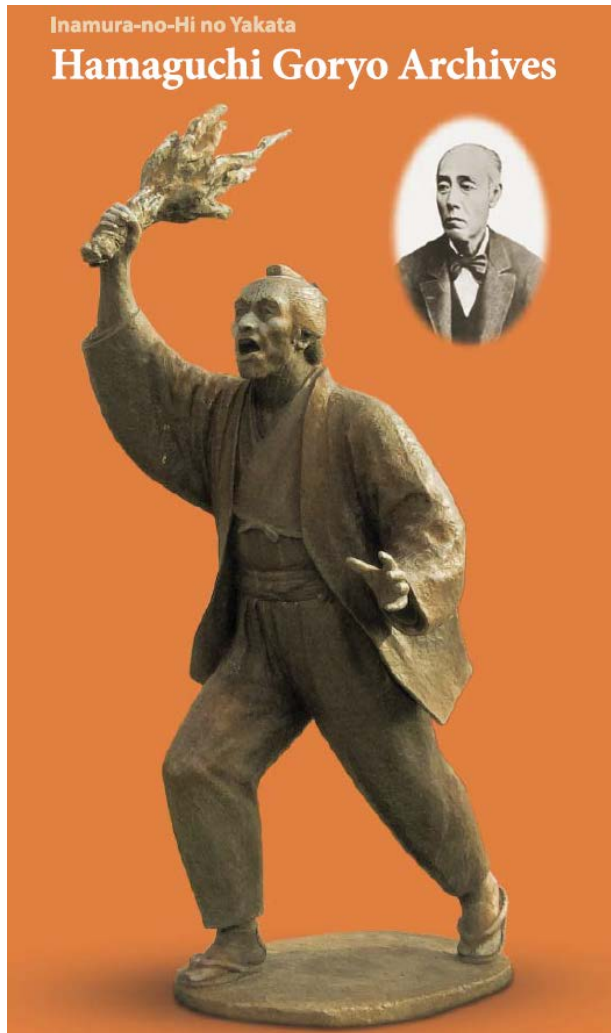
TAKEYA Kimio takeya.kimio@jica.go.jp

Distinguished Technical Advisor to the President, JICA
/Visiting Professor, Tohoku University, IRIDeS

International Research Institute of Disaster Science
/Member of UNFCCC Executive Committee of W.I.M. Loss & Damage



Inamura-no-hi is famous for evacuation alert



From
Hamaguchi Goryo Archives Tsunami Educational Center

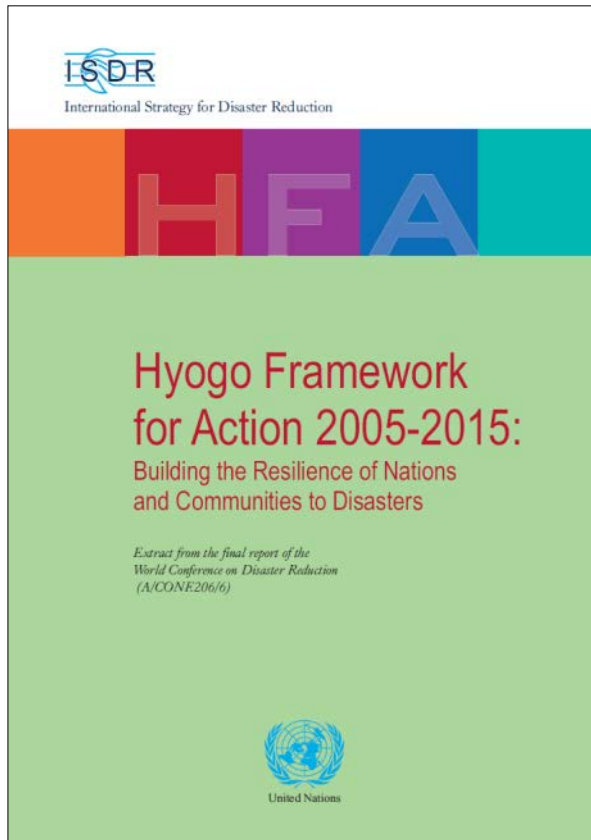
Impact of first captured Tsunami attack

- Huge Impact of Sumatra Tsunami movie, Dec. 2004



- For some European country, this was a biggest mortality induced natural disaster after world war II

Inamura-no-hi Concept was applied to Un Document Hyogo Framework for Action



Priorities for Action				
<p>1. Ensure that disaster risk reduction (DRR) is a national and a local priority with a strong institutional basis for implementation.</p> <ul style="list-style-type: none"> • DRR institutional mechanisms (national platforms); designated responsibilities; • DRR part of development policies and planning, sector wise and multisector; • Legislation to support DRR; • Decentralisation of responsibilities and resources; • Assessment of human resources and capacities; • Foster political commitment; • Community participation. 	<p>2. Identify, assess and monitor disaster risks and enhance early warning.</p> <ul style="list-style-type: none"> • Risk assessments and maps, multi-risk: elaboration and dissemination; • Indicators on DRR and vulnerability; • Data and statistical loss information; • Early warning: people centered; information systems; public policy; • Scientific and technological development; data sharing, space-based earth observation, climate modeling and forecasting; early warning; • Regional and emerging risks. 	<p>3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels.</p> <ul style="list-style-type: none"> • Information sharing and cooperation; • Networks across disciplines and regions; dialogue; • Use of standard DRR terminology; • Inclusion of DRR into school curricula, formal and informal education; • Training and learning on DRR: community level, local authorities, targeted sectors; equal access; • Research capacity; multi-risk; socio-economic; application; • Public awareness and media. 	<p>4. Reduce the underlying risk factors.</p> <ul style="list-style-type: none"> • Sustainable ecosystems and environmental management; • DRR strategies integrated with climate change adaptation; • Food security for resilience; • DRR integrated into health sector and safe hospitals; • Protection of critical public facilities; • Recovery schemes and social safety-nets; • Vulnerability reduction with diversified income options; • Financial risk-sharing mechanisms; • Public-private partnership; • Land use planning and building codes; • Rural development plans and DRR. 	<p>5. Strengthen disaster preparedness for effective response at all levels.</p> <ul style="list-style-type: none"> • Disaster management capacities: policy, technical and institutional capacities; • Dialogue, coordination and information exchange between disaster managers and development sectors; • Regional approaches to disaster response, with risk reduction focus; • Review and exercise preparedness and contingency plans; • Emergency funds; • Voluntarism and participation.

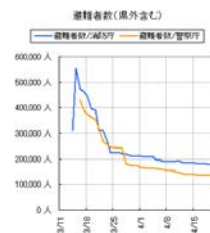
2. Identify, assess and monitor disaster risks and **enhance early warning.**

- Risk assessments and maps, multi-risk: elaboration and dissemination;
- Indicators on DRR and vulnerability;
- Data and statistical loss information;
- **Early warning: people centered; information systems; public policy;**
- Scientific and technological development; data sharing, space-based earth observation, climate modeling and forecasting; **early warning;**
- Regional and emerging risks.

2011 East Japan Tsunami Evacuation Situation



- 460,000 residents lived in the tsunami affected area
- Total casualties were around 18,000
- Evacuation ratio can be estimated more than 96 %
- This high evacuation ratio achieved by common sense of Japanese people for Earthquake and Tsunami, social system for Tsunami Early Warning including public TV emergency news and continuous evacuation drill efforts
- 65% of casualties were aged people
- Disabled person mortality ration was double to others



Successful case & unsuccessful case

The students started evacuation promptly and voluntarily, following their experiences of evacuation drills.

The students decided to evacuate further to higher ground based on their own observation of situation.



(Source: Research Center for Disaster Prevention in the Extended Tokyo Metropolitan Area, Gunma University)

Lesson Learned from 2011 East Japan Tsunami

- Most of the people evacuated by various way of Early Warning, but local economy was completely destroyed.
- Structure measures are effective for “Extensive Risk” but not enough so that society must prepare for “Intensive Risk” with best combination of Structure and Non-structure measures.

Not well known Hamaguchi's spirit for Build Back Better

Goryo then came up with the plan to build a seawall to protect the village. It is more than 600 meters long, 20 meters wide, and 5 meters tall. Goryo led Hiromura's recovery from disaster by spending his own money to hire villagers for the construction. Since that time, the seawall has minimized damage to the town from tsunamis.



Goryo Hamaguchi's plan to build a seawall has protected the town from tsunami disasters

From
Hamaguchi Goryo Archives Tsunami Educational Center

“Cash for work” concept

“Build Back Better” to prevent future risk

Sendai Framework for DRR, 2015-2030

Sendai Framework
for Disaster Risk Reduction
2015 - 2030



Priority 1

Understanding disaster risk

Priority 2

Strengthening disaster risk governance
to manage disaster risk

Priority 3

Investing in disaster risk reduction for resilience

Priority 4

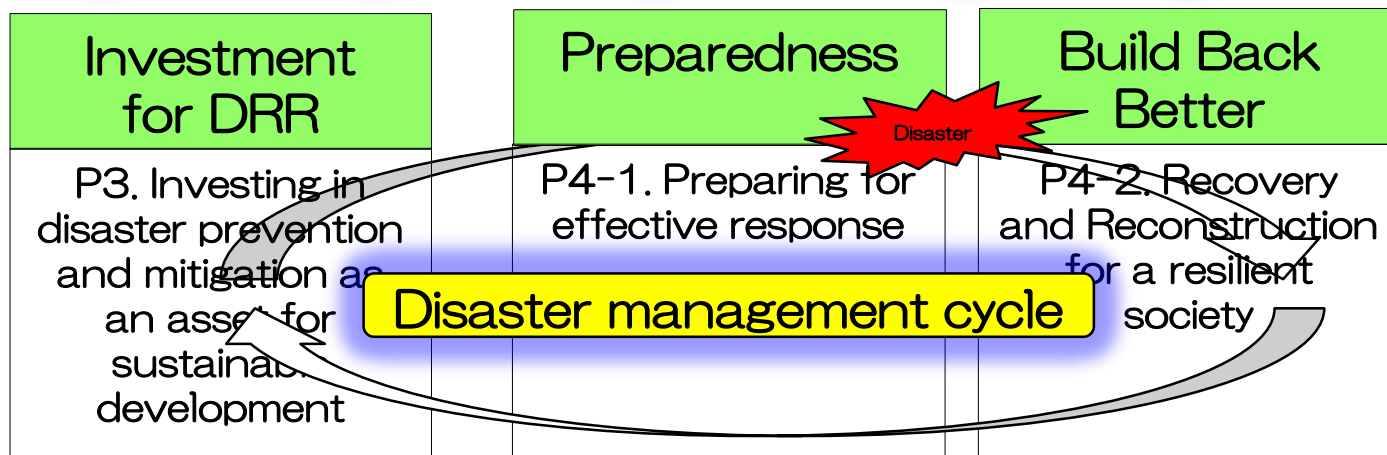
Enhancing disaster preparedness for effective
response, and to «Build Back Better» in
recovery, rehabilitation and reconstruction

Logical Structure of the Priority for Action

Governance/Mainstreaming

P2. Strengthening governance to manage disaster risk

Leadership/Governance/Management



Knowledge/Evidence/Science Support

Understanding Disaster Risk

P1. Understanding Disaster Risk

Risks in Sendai Framework; Risk type 1

Existing Risk



Future Risk
produced by development



Hazard is same, but
bigger exposure by development,
so “Risk” will increase!

Risks in Sendai Framework; Risk type 2



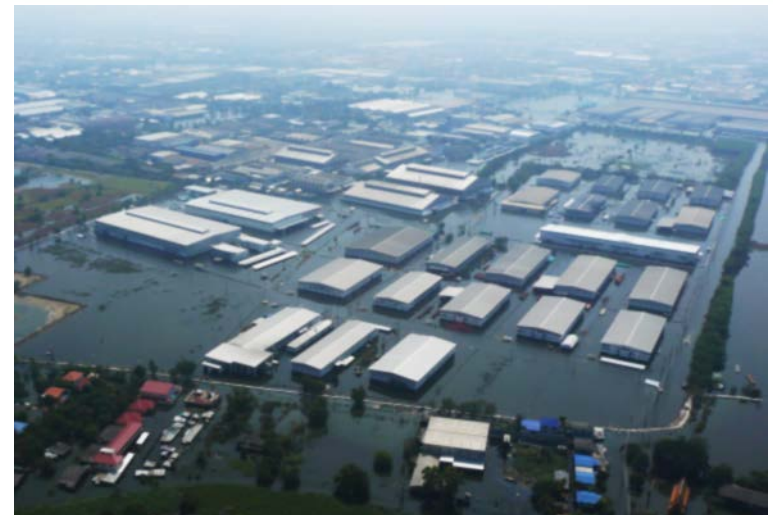
Extensive event,

High frequency happen,
small damage by each
but huge damage by total



Intensive event,

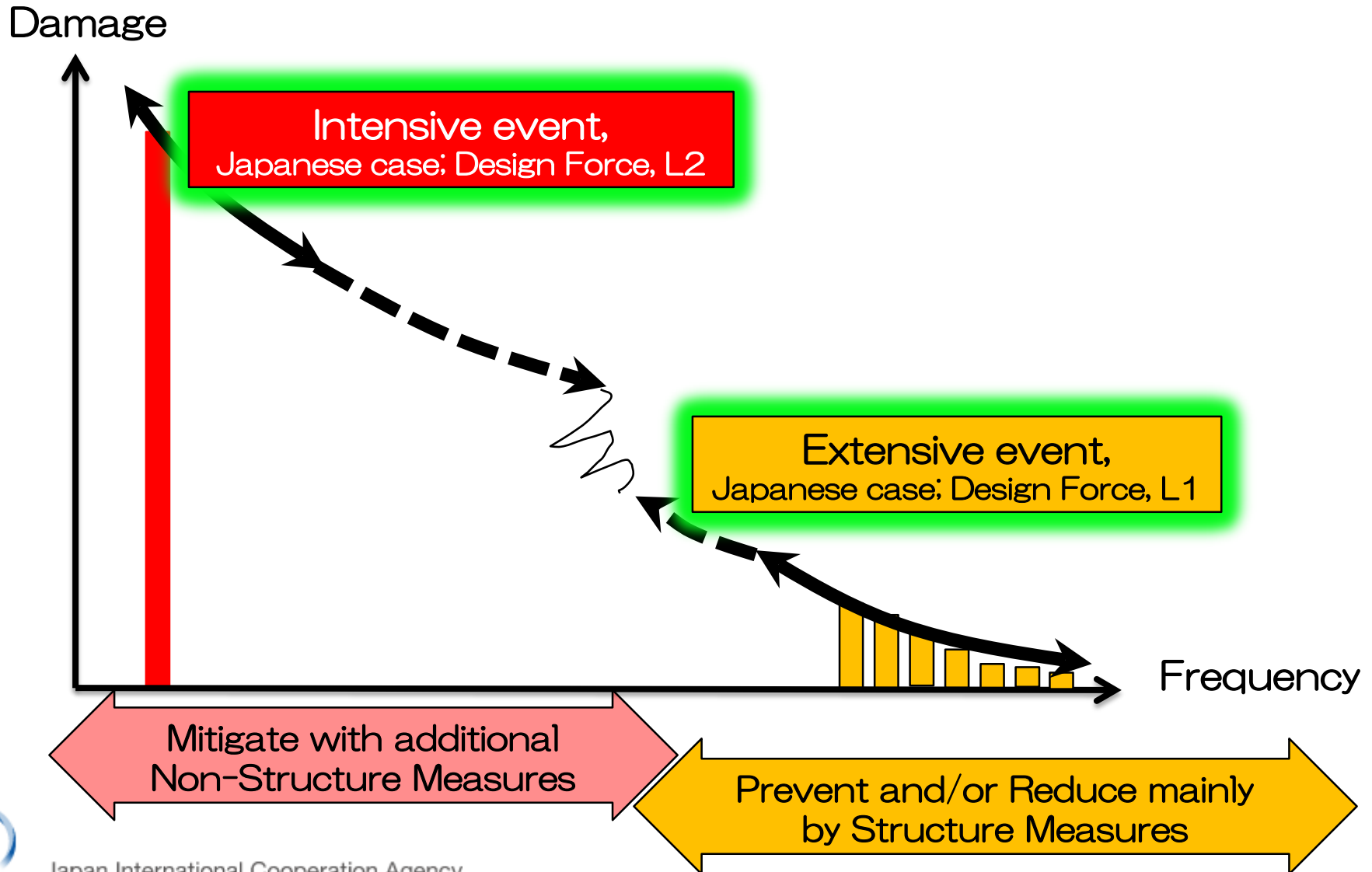
Low frequency but
serious damage by one event



Typhoon Ondoy in Manila 2009

Thai Flood 2011

In order to make Investment define design level & residual risks





UN World Conference on Disaster Risk Reduction

For every **€1**
invested in disaster prevention,
€4 to €7
are saved in disaster response.

#Road2Sendai #WCDRR

Source: EU

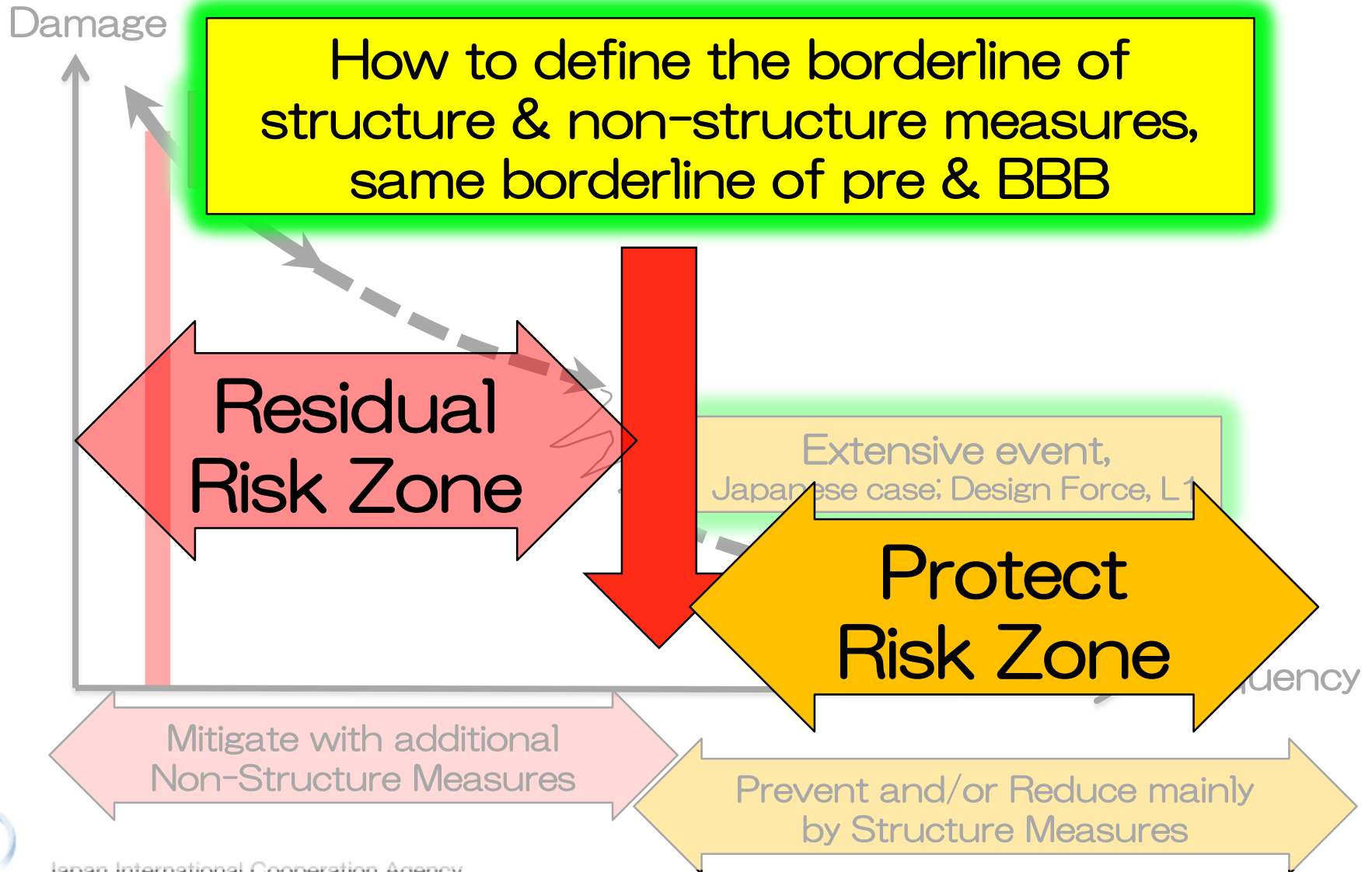
Humanitarian Aid
& Civil Protection

25/02/2015

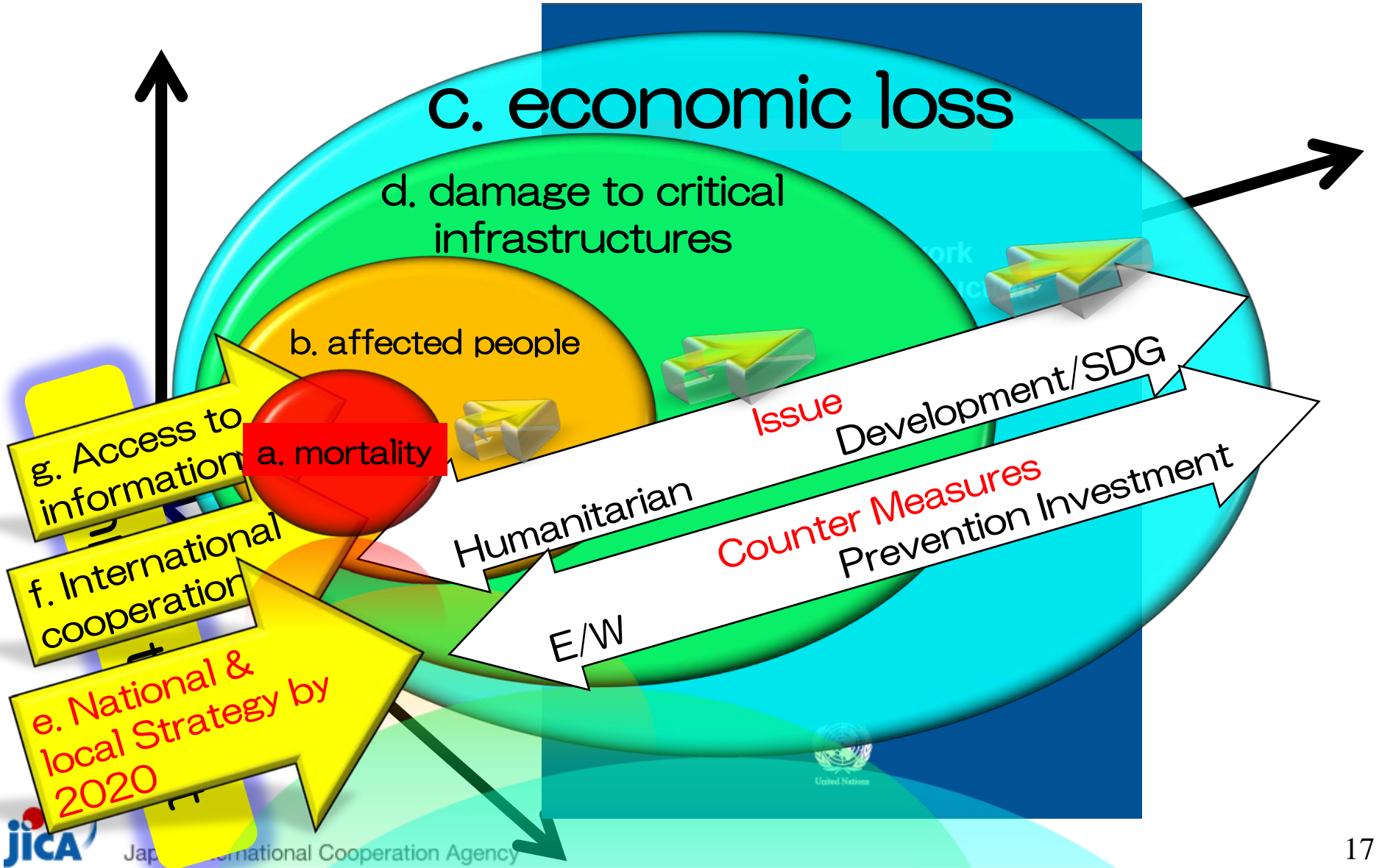
Example; Philippine Yolanda case proposal, Nov 2013



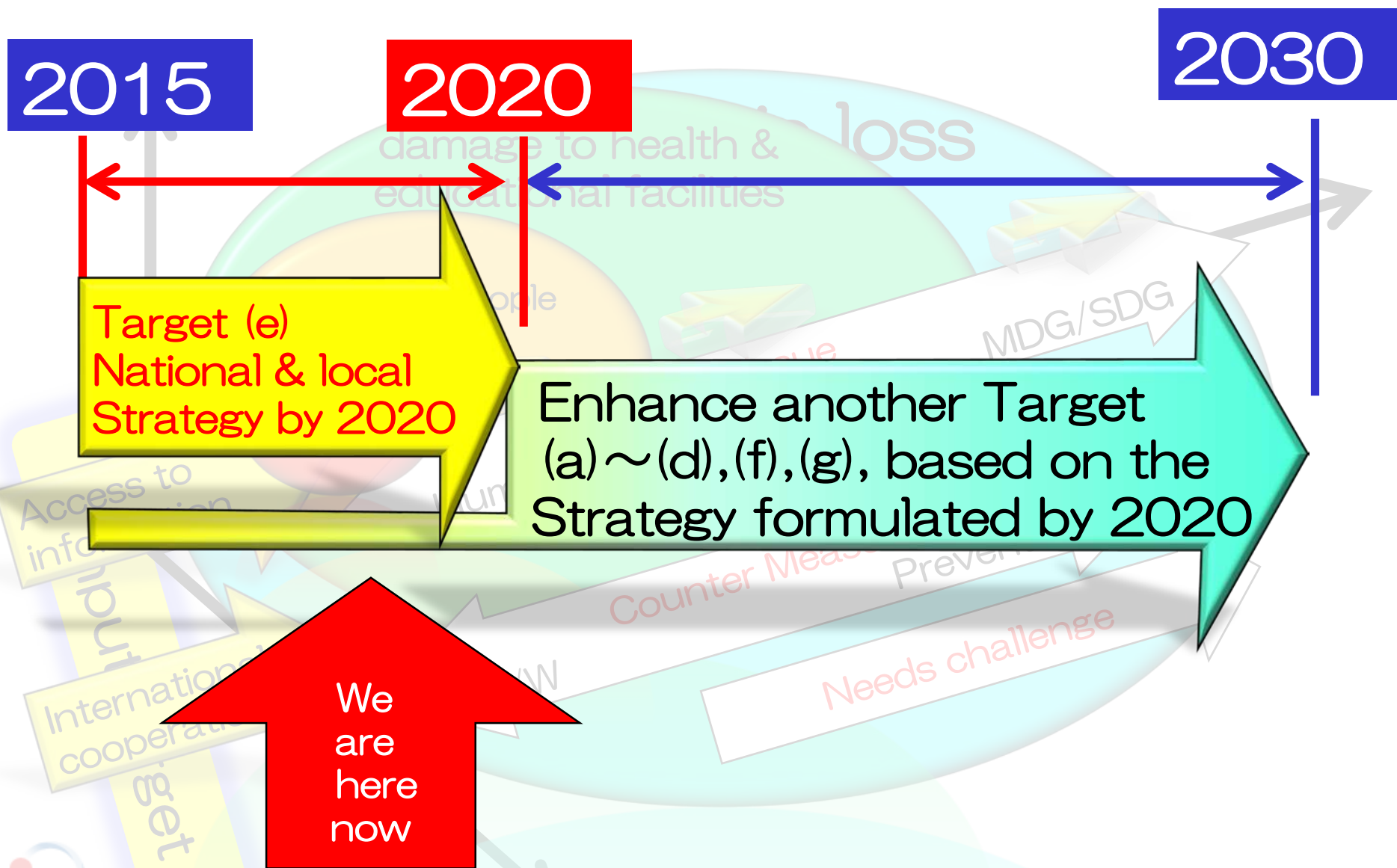
In order to make **Investment** define design level & residual risks



Logical Relation between 7 Targets



2 phases of 7 Targets for 2020 & 2030



JICA's Methodology to enhancing Target(e)

~ Dialogue with Minister of DRR agency & line Ministries ~

- Dialogue with Minister of national DRR agency
 - with another line ministry high level official, including inviting to Japan, act as a National Platform Team by the leadership of DRR agency.
 - Outcome of this dialogue, develop the Road Map for DRR in several countries, Sri Lanka, Vietnam and others.



JICA's Methodology to enhancing Target(e) ~ Regional DRR Agency Meeting for Local Plan ~

- Host regional DRR agency meeting for Local DRR Plan focusing to GPDRR and RPDRR like AMCDRR
 - to discuss real gaps and barrier for Target(e).
 - Outcome of this meeting, “Practical Guide for Developing Local DRR Plans toward 2020” , as 8 steps for developing Local DRR Plans.



Outcome of Regional DRR Agency Meeting for Local Plan ~ 8 steps for developing Local DRR Plans ~

Eight (8) steps for developing Local DRR Plans

1. Confirmation of hazard

- a) Hazard information prepared by national or upper authorities should be referred.
- b) If there is not enough hazard information, historical disaster records is recommended to be utilized instead, due to constraints of time and budget.

2. Understanding of local disaster risks

- a) Recognize existing risks and possible future risks which hinder development.
- b) Prioritize and identify risks which has large scale impact.
- c) Focus on prioritized risks until 2020 but other risks should be reduced after 2020.

3. Confirmation of DRR measures by national and upper authorities

- a) Refer to urban planning and DRR plans developed by national governments to confirm mainly structural measures by disaster types.

4. Identification of residual risks considering time-span

- a) Know implementation schedule of structural measures, because it takes time to complete.
- b) Identify residual risks corresponding to time-span.

Outcome of Regional DRR Agency Meeting for Local Plan ~ 8 steps for developing Local DRR Plans ~

Eight (8) steps for developing Local DRR Plans

5. Consideration of DRR measures to reduce residual risks

- a) Seek the best mixture of structural and non-structural measures.
- b) Grasp other related plans developed by local governments such as land use plans, then integrate into local DRR plans.

6. Developing of local DRR plan with prioritized DRR measures

- a) Understand budget limitation and residual risks, set priorities to narrow down feasible and practical minimum DRR measures with stakeholders' consensus.
- b) Establish government procedure for approval of the developed plans.

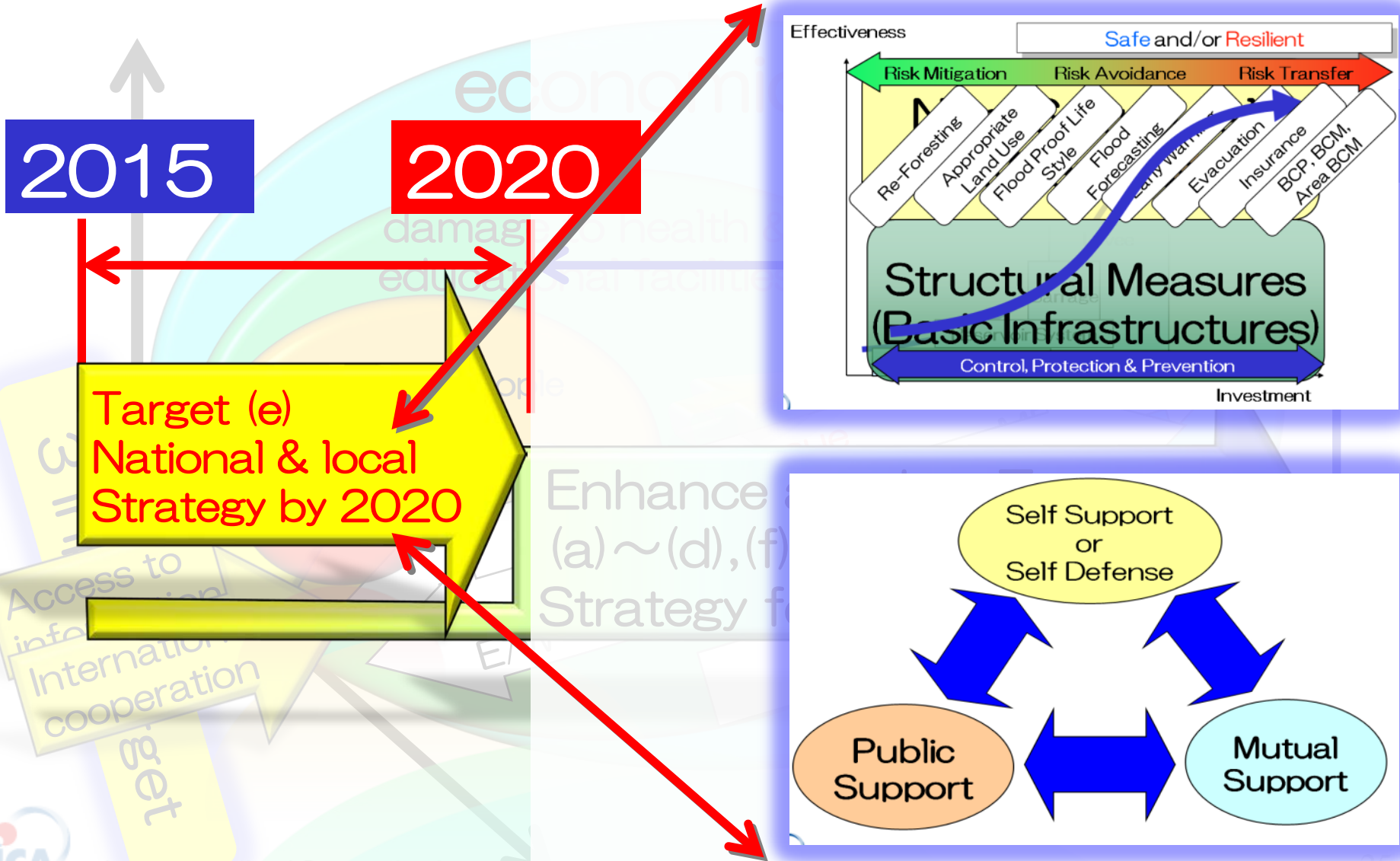
7. Allocation of budget from both local and national government

- a) Stipulate which organizations should shoulder the expenses for implementing DRR measures. In case of lacking budget, it is needed to take an action for secure.

8. Implementation of DRR measures and periodical review of DRR plans

- a) Periodically review and revise the plans based on changing condition including revision of hazard information and national DRR plan.

Sendai Framework for DRR Targets =Relation between 7 Targets for 2030=



Sendai Initiative by Japanese Gov.

2015

2020

Sendai Initiative by Japanese Gov.
4 billion US\$ financial support
training of 40,000 DRR officials,
within 4 years, from 2015 to 2018

Target (e)
National & local
Strategy by 2020

Year 2015 ~ 2016 total

\$ 1.98 billion (by calendar year)
39,776 DRR officials (by fiscal year)

Huge and urgent needs to
enhance Local DRR Plan till 2020