

Disaster Risk Reduction and Water: “Time for Action”

October 6th, 2015

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Coordinator

**High Level Experts and Leaders Panel on
Water and Disasters**

**Glimpse of a water-related disaster,
March 11th, 2011**

Viewed from Kamaishi City Hall

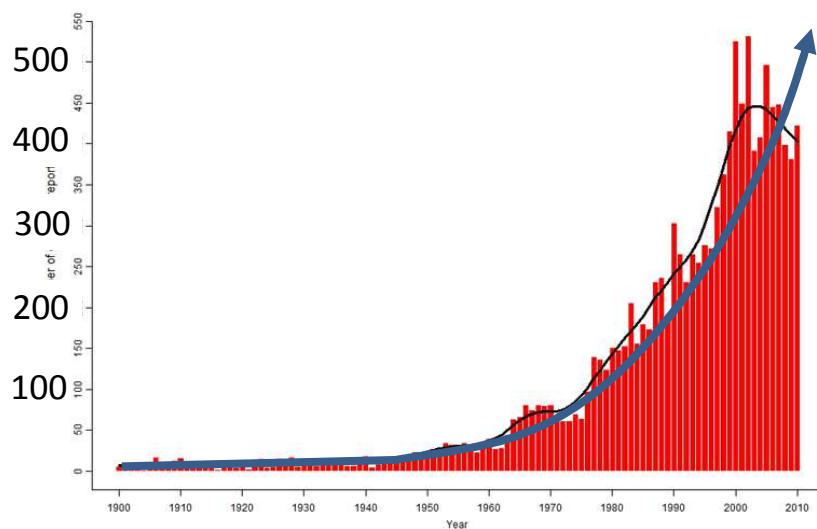
Why Water and Disasters?

Why “Water and Disasters” ?

- 1. Disasters are increasing in numbers and impacts, crippling sustainable development*
- 2. 95% of natural disasters in the world are water related (number of affected people)*
- 3. Water related disasters can occur anywhere*
- 4. “Water and disasters” are poverty issue*
- 5. Climate change will negatively impact status of water and disasters*
- 6. Governments are getting more concerned about “water and disasters”*

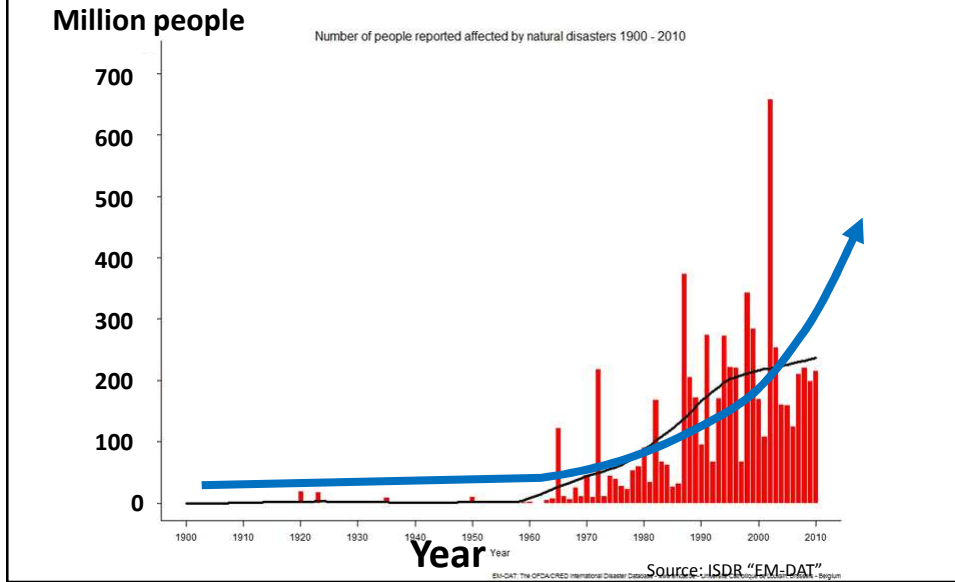
Disasters are increasing in numbers and impacts

Number of reported natural disasters(1900-2010)

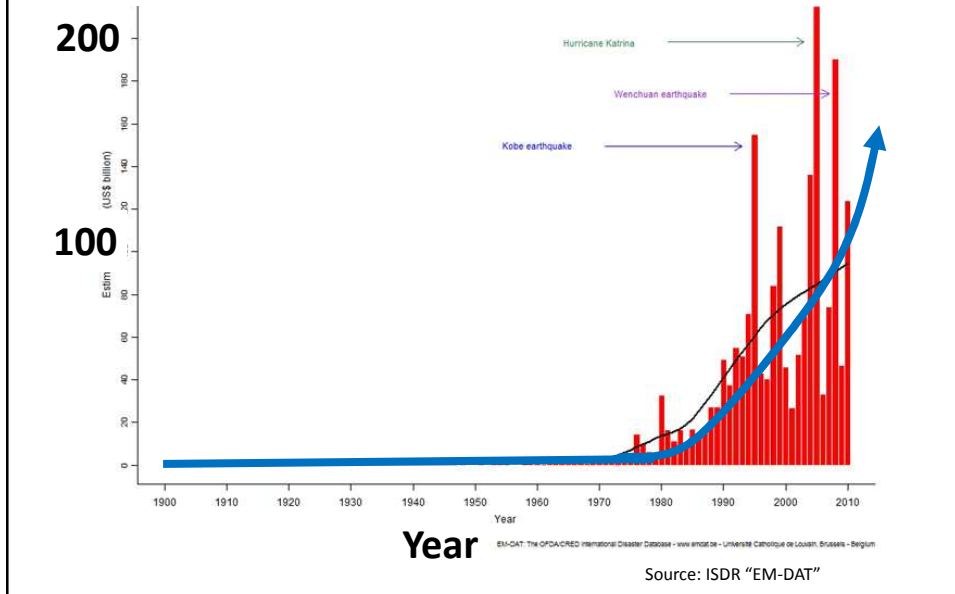


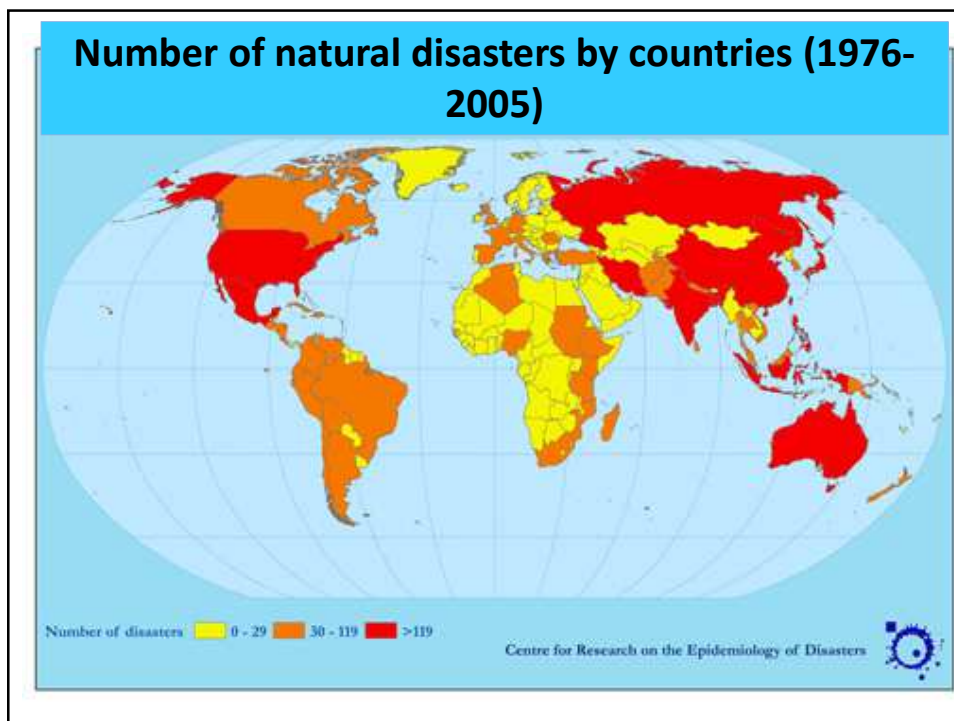
Source: ISDR "EM-DAT"

Number of people affected by natural disasters (1900—2010)



Estimated damage caused by natural disasters (1900-2010)

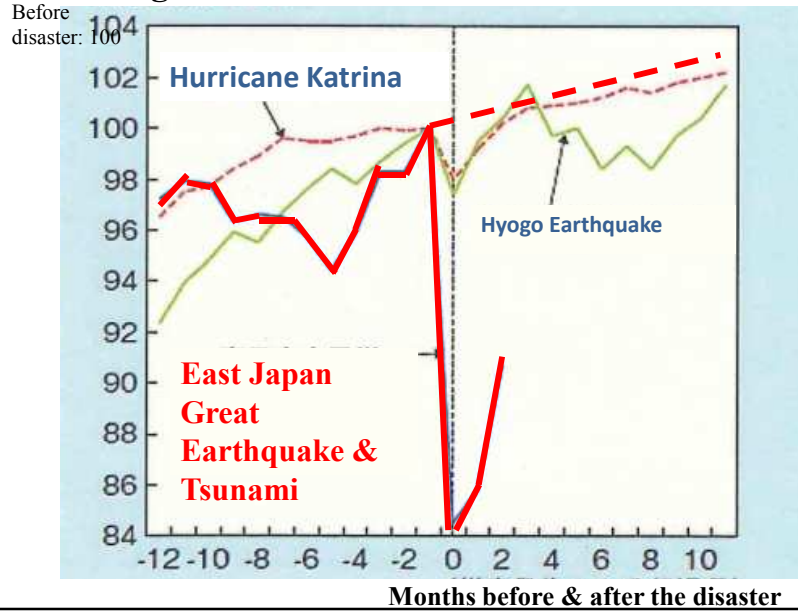




**Disasters will negatively
impact sustainable
development of countries**

Economic impact of mega-disasters...

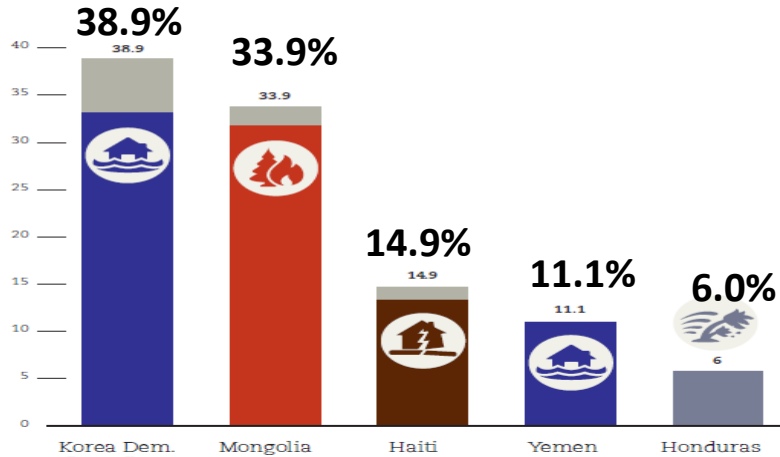
Effect of Mega-disasters to National Industrial Production



National GDP is severely affected by disasters

Top five countries severely affected by disasters (1994-2013)

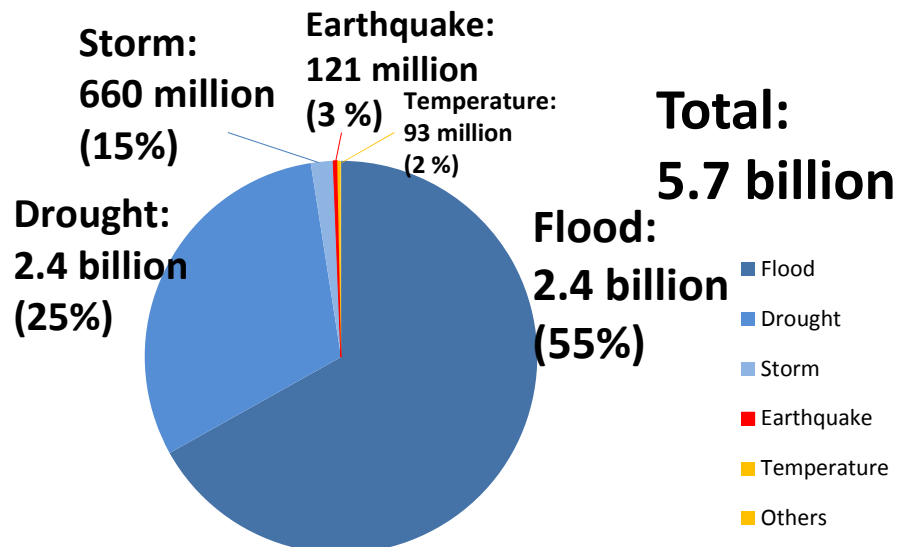
Economic losses as % of GDP



Source: CRED "The human cost of natural disasters 2015"

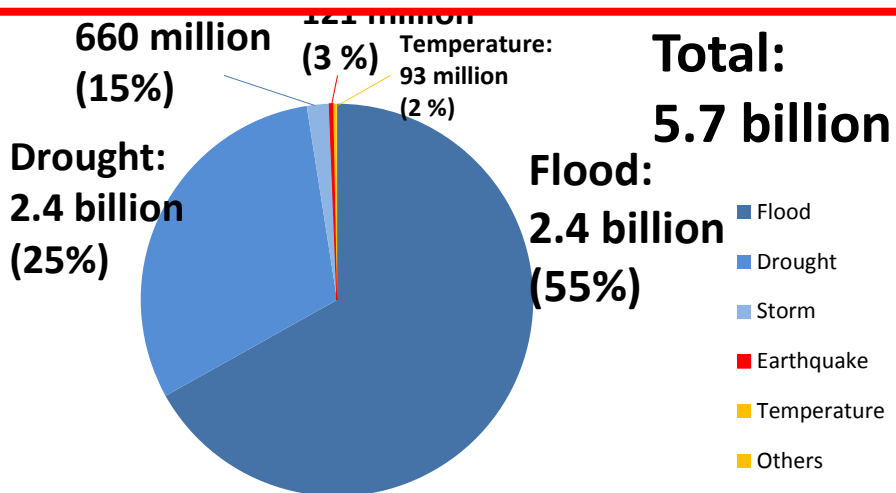
“Water and disaster” is everybody’s business

Number of people affected by disasters (1994-2013)



Source: CRED "The human cost of natural disasters 2015"

95% of disasters are water-related disasters

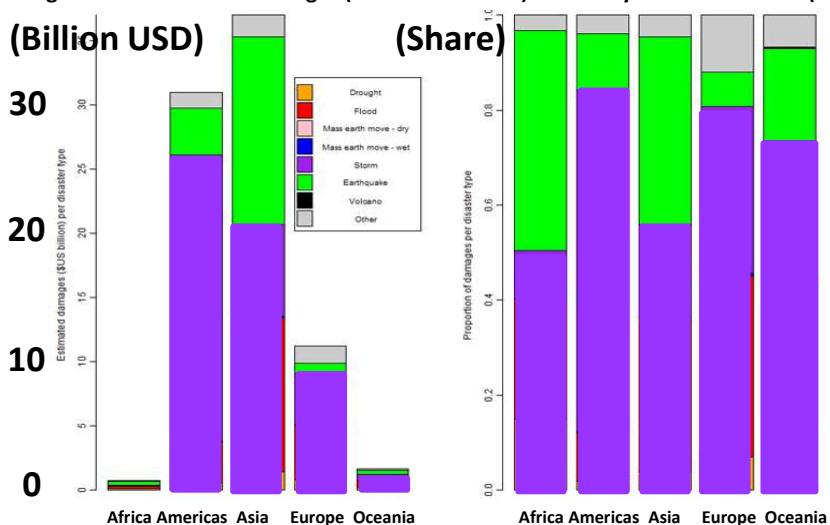


Source: CRED "The human cost of natural disasters 2015"

Economic damage caused by disasters

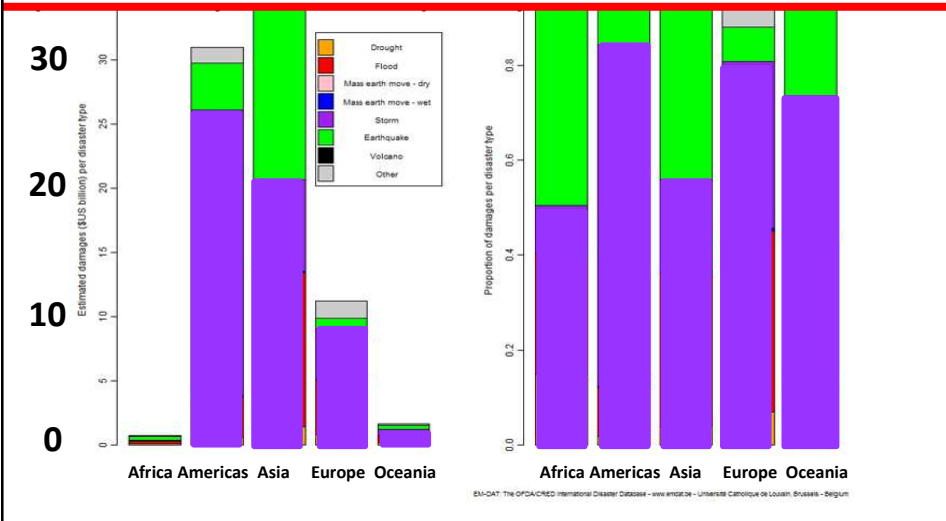
Blue: Water-related disasters; Green : Earthquake

Average annual economic damages (US Billion Dollars) caused by natural disasters (1990-2010)

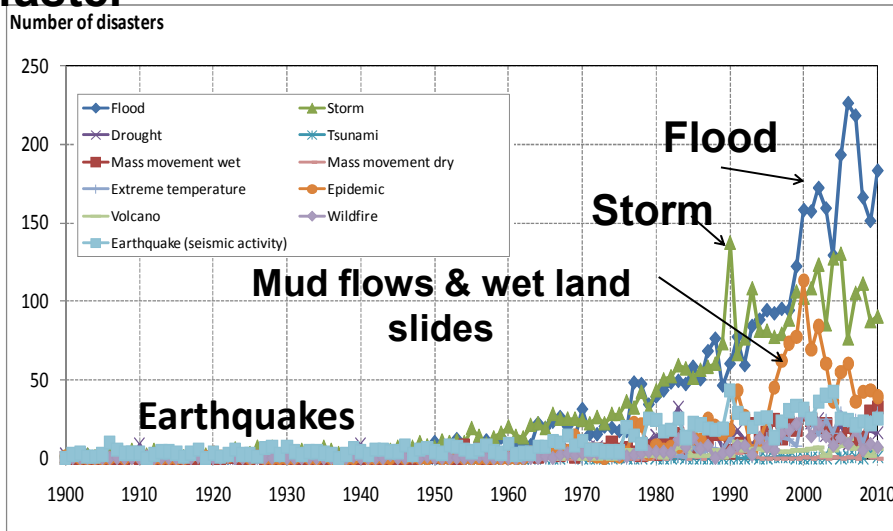


EM-DAT: The OFDA/CRED International Disaster Database - www.emdat.be - Université Catholique de Louvain, Brussels - Belgium

70% of economic loss by disasters are water-related

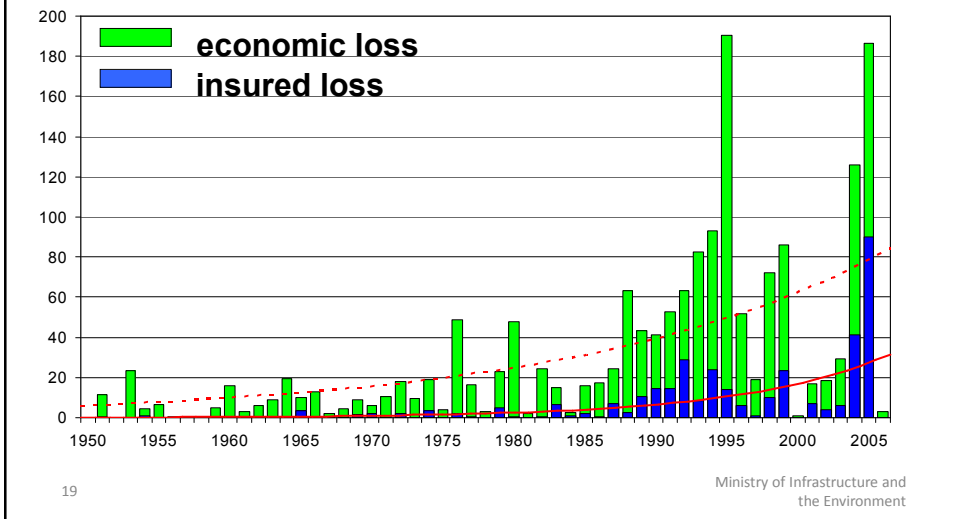


Water-related disasters are increasing faster

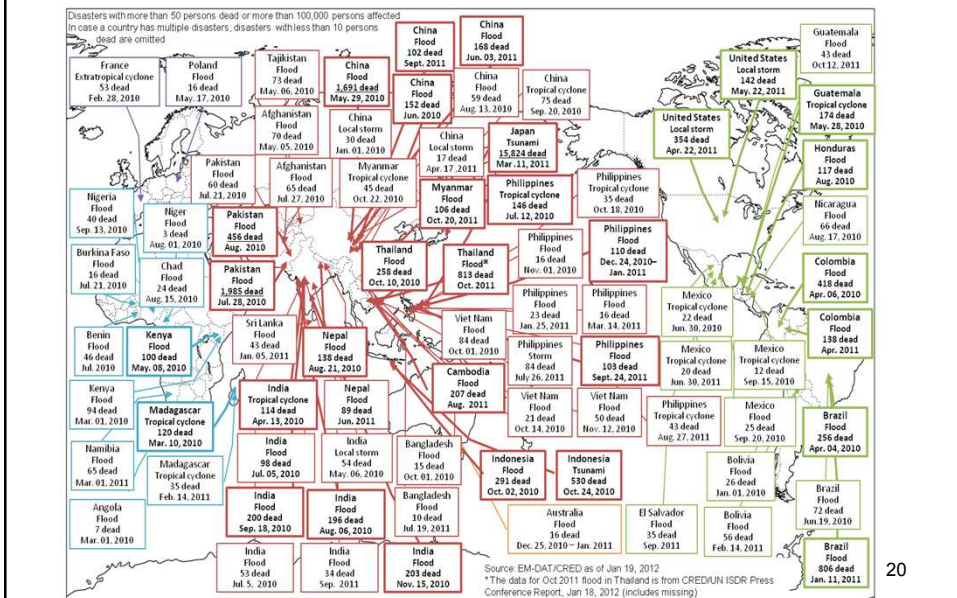


Source: EM-DAT: The OFDA/CRED International Disaster Database
 www.emdat.be - Université Catholique de Louvain - Brussels - Belgium
 As of Sept 7, 2011

Increasing global economic loss by flooding (1950 – 2006)



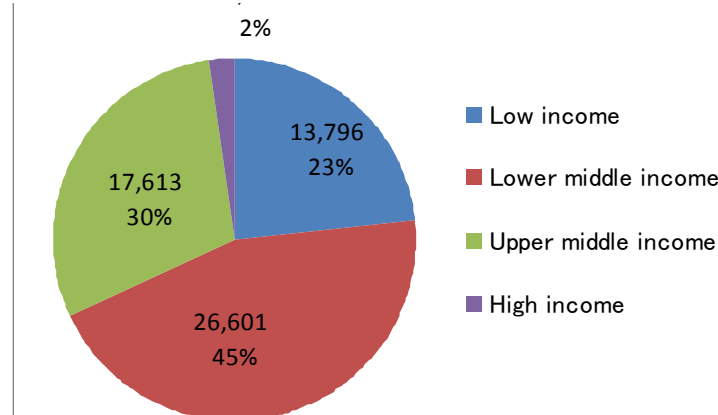
Water related disasters can happen anywhere - Map of Water-related disasters in 2010-2011 -



“Water and Disasters” is strongly linked to poverty issue

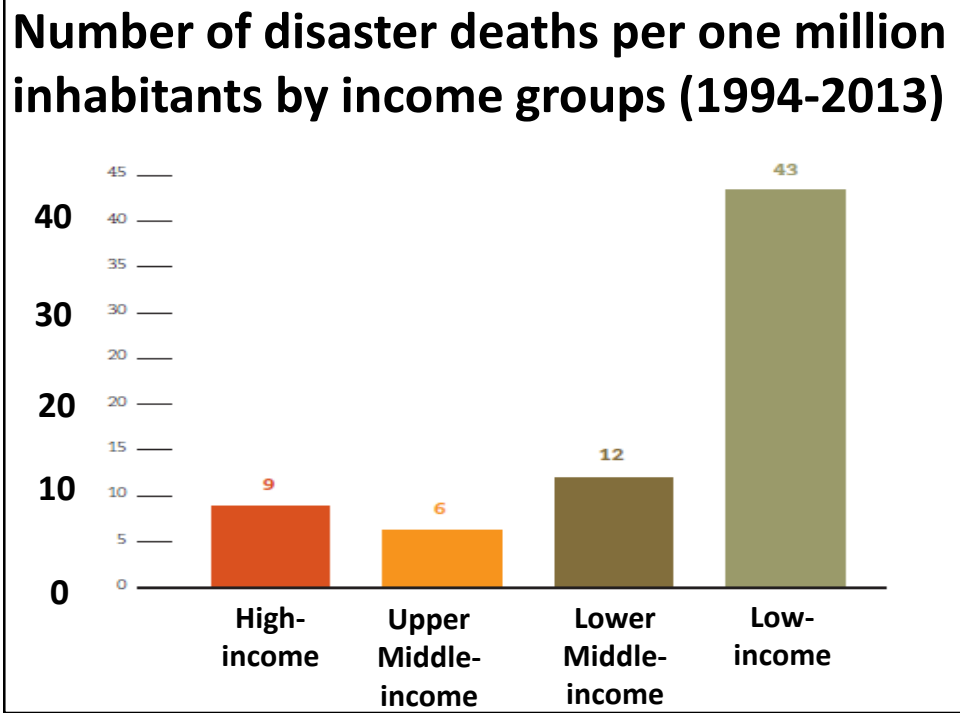
Number of fatalities by floods (2001-2010)

- 70 % of human loss by flooding are from “low income” or “lower middle income” countries -



Water and disasters are strongly linked to poverty issues

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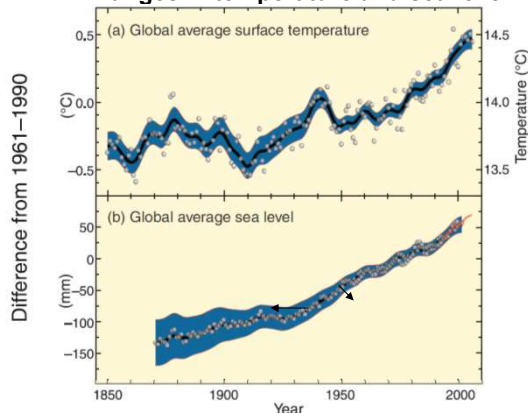


Impacts of Climate Change

Rising temperature & sea level

- ✓ Global average surface temperature rises 0.74 degrees celsius/100yrs
- ✓ Global average sea level rises 17cm/100yrs
- ✓ Faster increase of the both in recent years

Changes in temperature and sea level



Source: IPCC SR4

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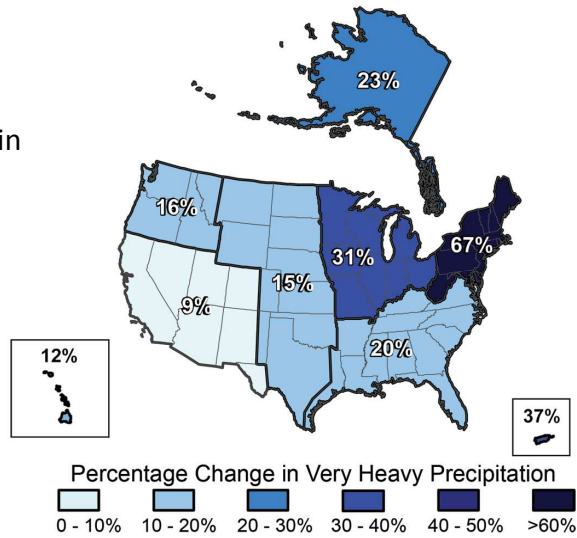
Projected impacts by climate change by sector

Phenomenon and direction of trend	Agriculture, forestry and ecosystems	Water resources	Human health	Industry, settlements and society
Warmer and more frequent hot days & nights (Certain)	Decreased yields in warmer environments	Effects on water resources relying on snow melt	Reduced human mortality	Declining air quality
Warm spells / heat waves (Very likely)	Reduced yields in warmer regions	Increased water demand; water quality problems	Increased risk of heat-related mortality	Reduction in quality of life; impacts on elderly, very young & poor
Heavy precipitation events (Very likely)	Damage to crops; soil erosion	Contamination of water supply	Infectious respiratory & skin disease	Disruption of societies due to flooding
Area affected by drought increases (Likely)	Land degradation, lower yields	More widespread water stress	Increased risk of water-borne diseases	Water shortages; reduced hydropower
Intense tropical cyclone activity increases (Likely)	Damage to crops	Disruption of public water supply	Increased risk of water-borne diseases	Disruption by flood; potential for migrations
Increased incidence of extreme high sea level (Likely)	Salinisation of irrigation	Decreased freshwater availability	Increased risk of water-borne diseases	Costs coastal protection

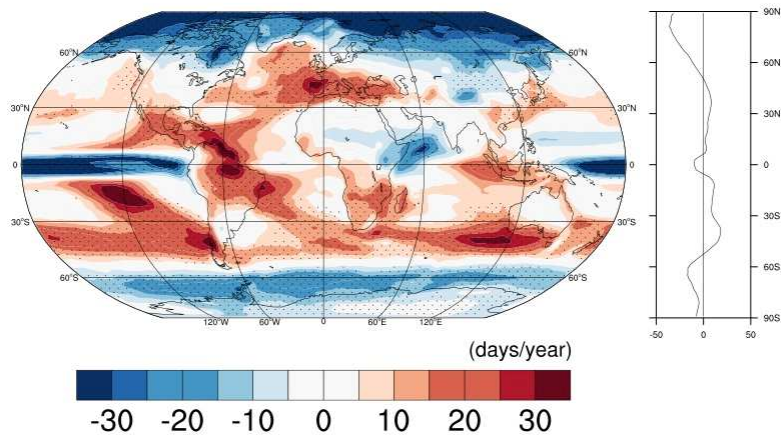
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Increase in frequency of heavy rainfall in the USA (1958 – 2007)

Observed Increases in Very Heavy Precipitation (1958 to 2007)



Many parts of the world will be drier

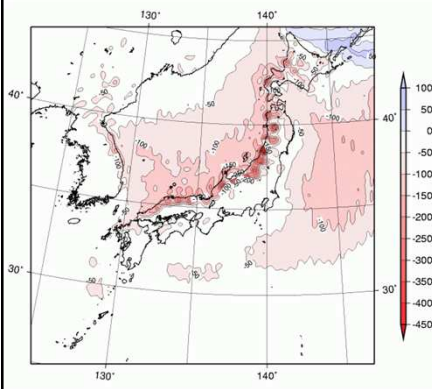


Decrease of snow is feared

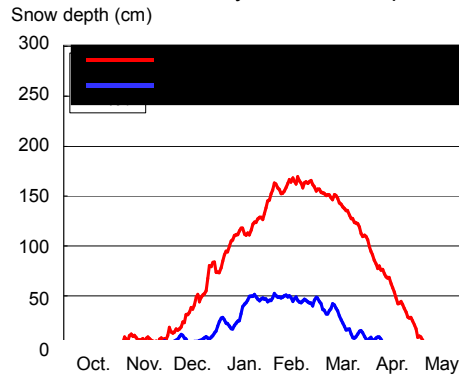


Snowfall will dramatically decrease in the northern regions.

In a 100 years' time, the upstream catchments of the Tone River will have considerably less snow depth.



Changes in annual snowfall (avg. of 2081-2100) - (avg. of 1981-2000)



Snow depth changes expected 100 years hence (Fujiwara)

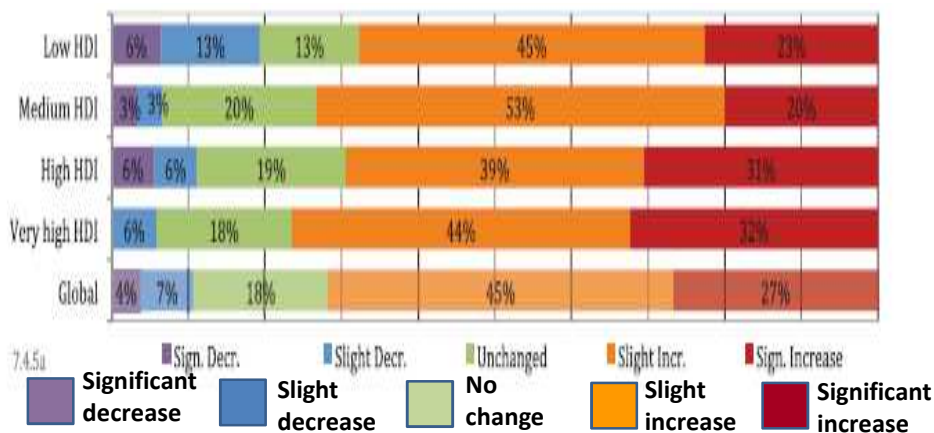
Source: Global warming projection vol. 6 (JMA)

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Governments are getting more concerned and serious about “water and disasters”

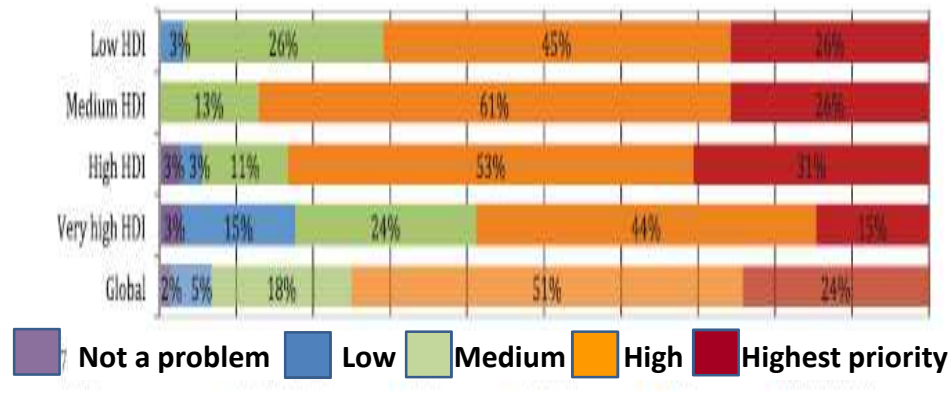
Disaster management is gaining importance within government

Perceived change in the importance of disaster management over the past 20 years



Priority of disaster management in the government is globally high

The importance of disaster management by governments



**What can we do to address
“Water and Disasters”?**

**Regular Global Discussion
on Water and Disasters
-As a starter for concrete actions-**

Benefit of Regular Discussion on Water and Disasters by International Community

- **Mega water-related disasters happen almost every year: New problems to tackle and new experiences to share...**
- **Leaders' awareness at the highest levels of governments will sustain national efforts to reduce DRR**
- **Science and technology is advancing fast by every seconds to benefit actions of DRR. Sharing them is critical!**
- **There is progress on climate change discussion. DRR should prepare for and follow-up the progress**
- **To mainstream water-related DRR in the national development planning requires long-term efforts/actions**
- **Following-up and monitoring SDGs and targets on water and disasters**

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2nd Special Thematic Session on Water and Disasters

UN-HQs, New York

November 18th

2nd United Nations Special Thematic Session on Water and Disasters

November 18th (Wednesday), 2015, UN-HQ, NY, USA

● Objectives

- ✓ Raise awareness on water and disasters
- ✓ Share experiences and good practices
- ✓ Discuss next steps for actions

● Organizer and Chair: UN Secretary-General

● Co-Chair: Special Envoy on Disaster Risk Reduction and Water

● Co-organizer: High-level Experts and Leaders Panel on Water and Disasters (HELP)

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Agenda

1. Opening Session

- Opening Speeches (SG, PGA, Special Envoy)
- Key-note Lecture

2. High Level Panel Discussion

- Discussion among ministers, heads of international organizations, etc. on decisions to enhance preparedness and response to water and disasters

3. Focused Panel Discussion

- **Panel discussion on science and technology**
Discussion among scientists and experts on ways to drastically improve readiness to water-related disasters through science and technology
- **Panel discussion on the role of major groups**
Discussion among experts, academia, practitioners, workers, and youth on their roles and required actions for better disaster risk reduction actions

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At the occasion of the Special Session in November ...

**- A Suggestion to make use of the
Special Session -**

Opportunity for Member States

- **High level politicians, administrators, scientists, and major group representatives on water and disasters will gather in the week of November 18th**
- **Awareness on water and disaster will be raised to the highest level through Special Thematic Session**
- **Time to start following up Summit Decision on SDGs and warming up for COP21**
- **Good occasion to exchange ideas and discuss future actions on water and disasters**



Group discussion by delegates in the week of Nov. 19th to address actions on water & disasters will be timely and meaningful

**HELP will help
to address water and disasters at
global/regional/country levels**

Thank you