2020 International Mayors Forum Preparatory Webinar Series #2:
"Local Governments, the Climate Crisis, and a Green Recovery from COVID-19"
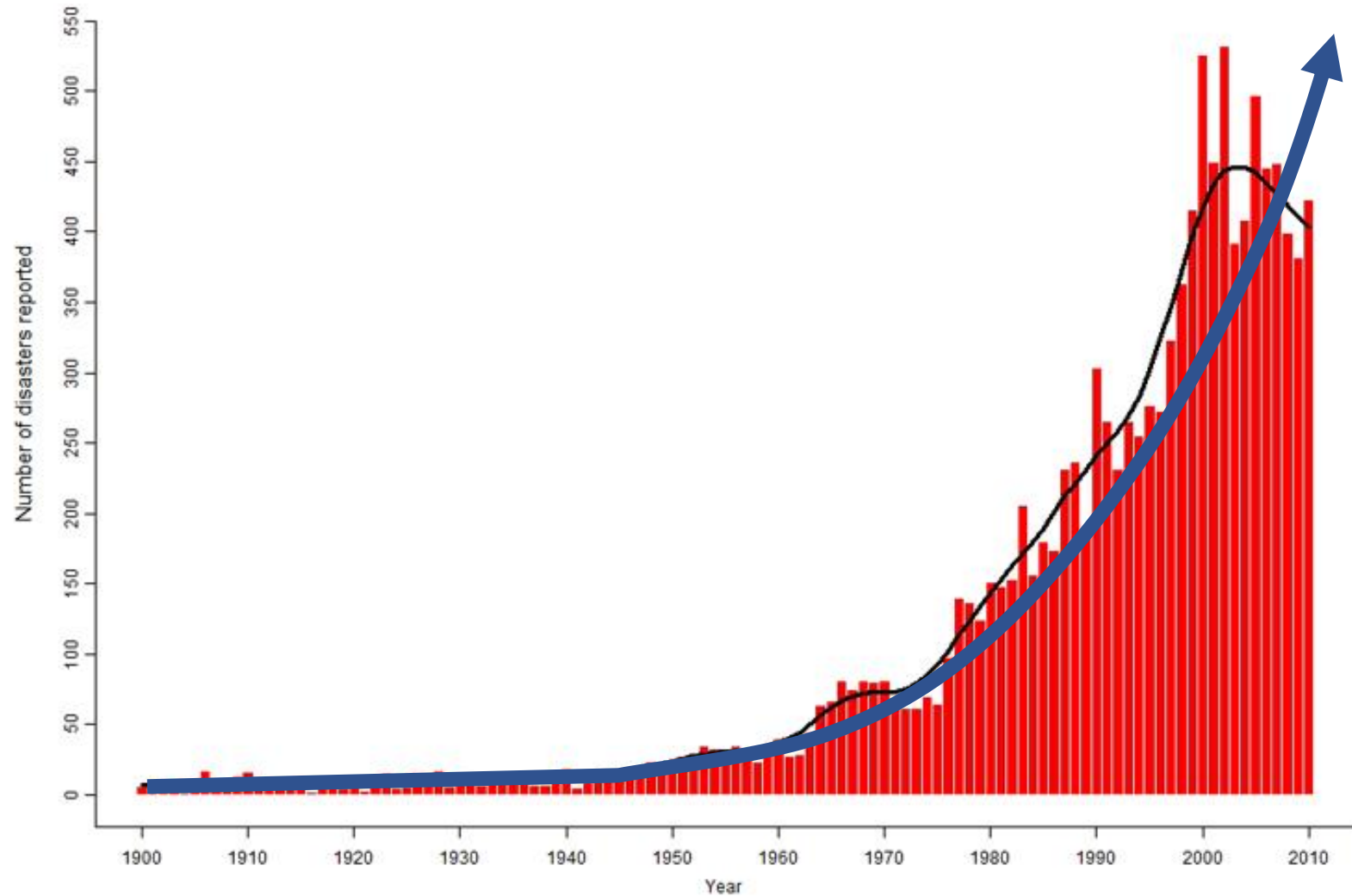**24 September 2020**

Water-related Disaster Risk Reduction under the COVID-19 Pandemic

Taeko Yokota, Programme Expert on DRR and Water
United Nations Center for Regional Development (UNCRD)

UNCRD

Water-related disasters – global trend
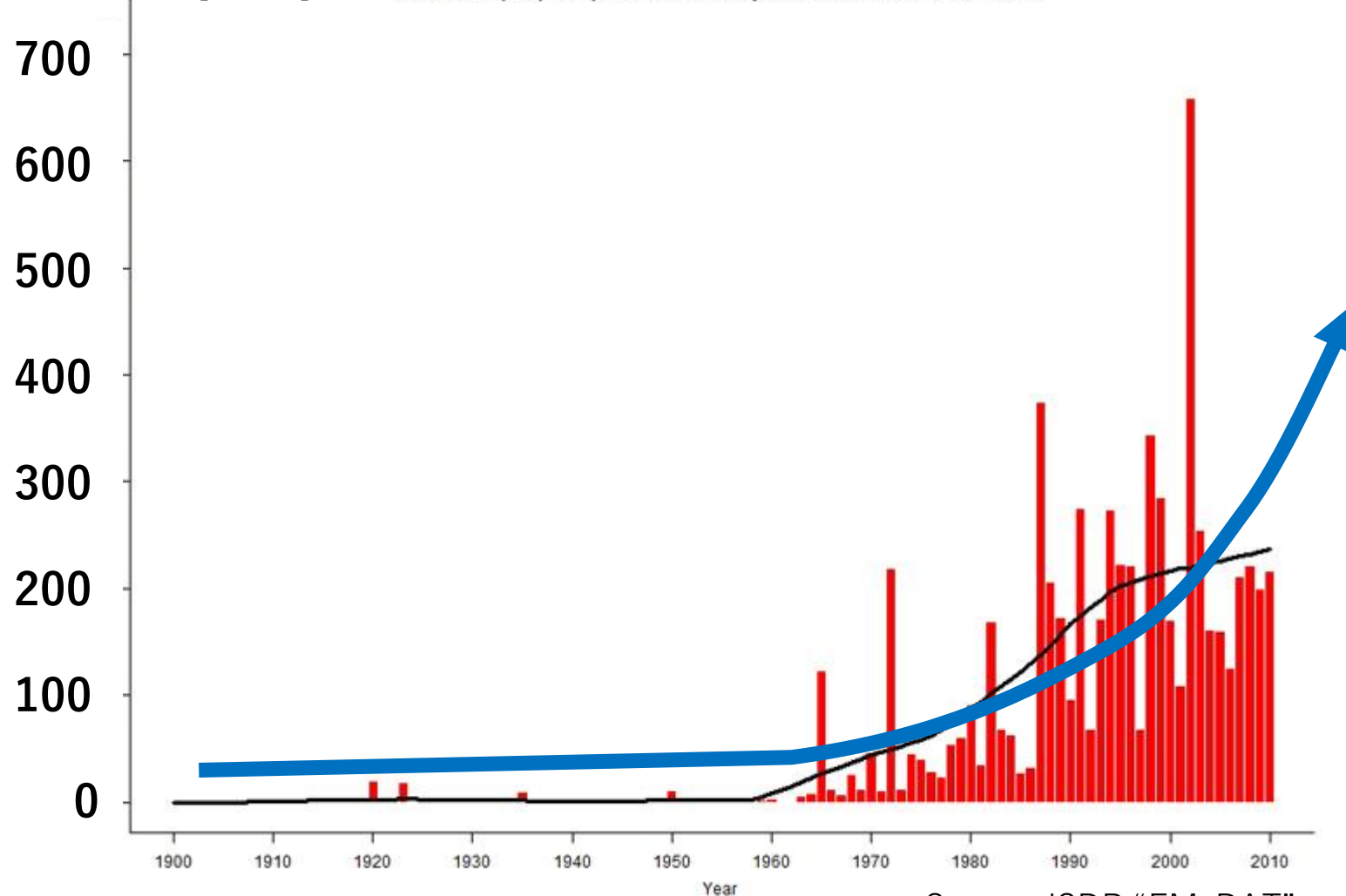
UNCRD

Number of reported natural disasters(1900-2010)

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

Source: ISDR "EM-DAT"

UNCRD

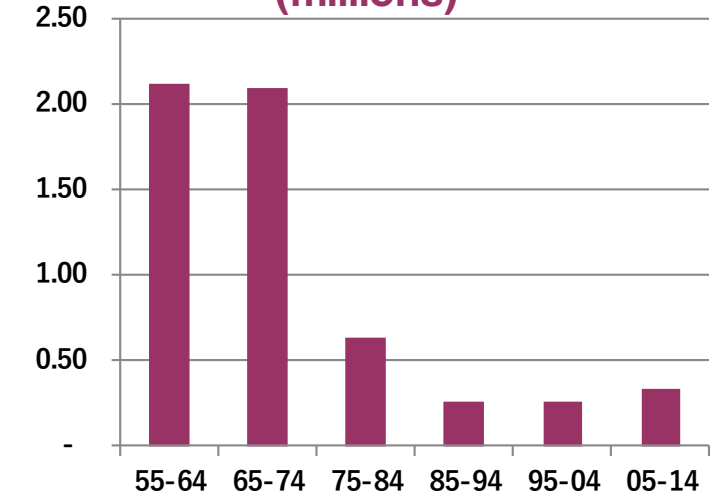# Number of people affected by natural disasters （1900 – 2010）

Million people

Number of people reported affected by natural disasters 1900 - 2010

700
600
500
400
300
200
100
0

1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010

Year

Source: ISDR "EM-DAT"

EM-DAT: The OFDA/CRED International Disaster Database - www.emdat.be - Universite Catholique de Louvain, Brussels - Belgium
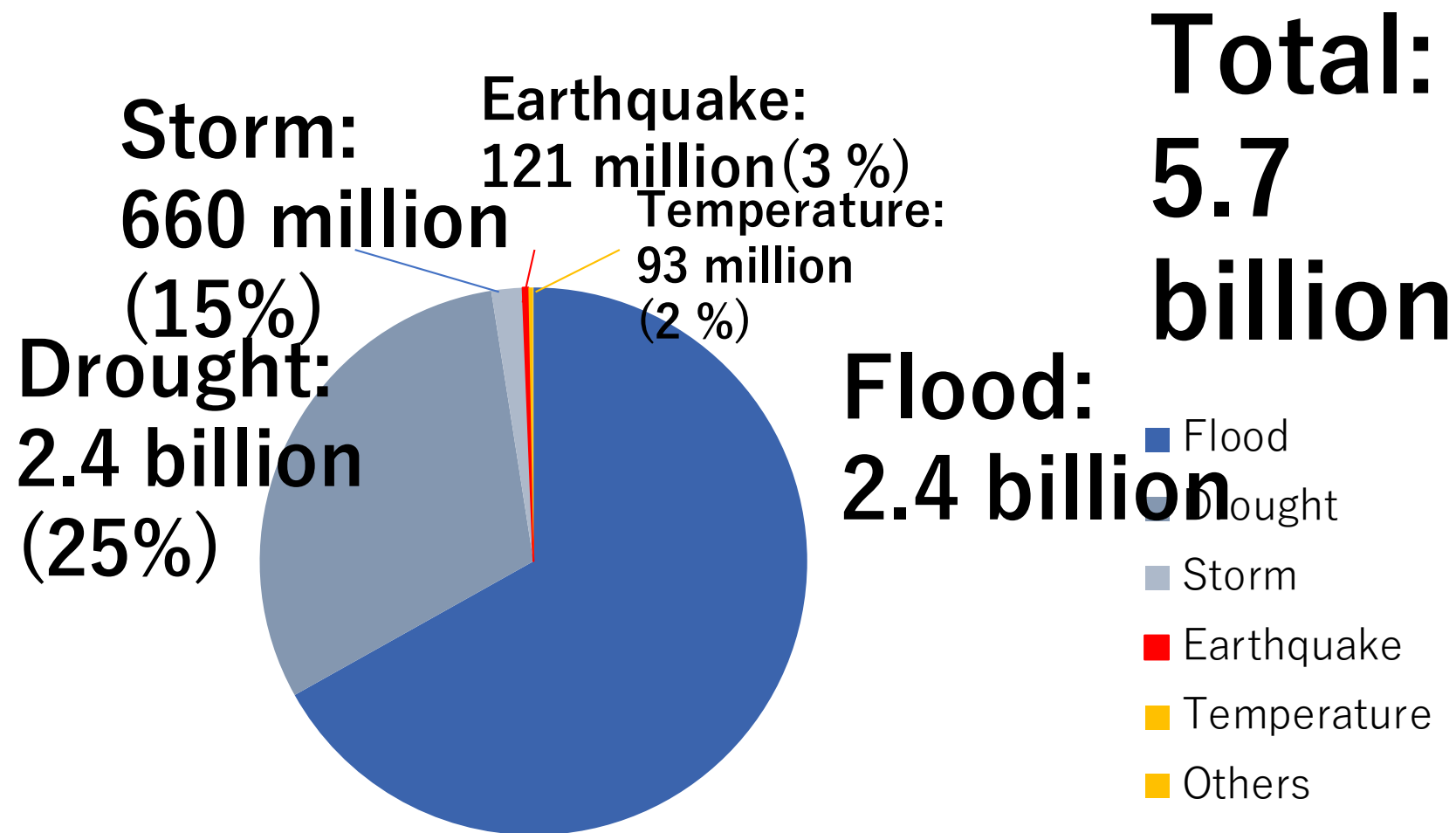
Losses in human lives by decade (millions)

2.50
2.00
1.50
1.00
0.50
-

55-64 65-74 75-84 85-94 95-04 05-14

Source: WMO

UNCRD

95% of disasters are water-related

Storm:
660 million
(15%)

Drought:
2.4 billion
(25%)

Earthquake:
121 million（3 %）

Temperature:
93 million
(2 %)

Flood:
2.4 billion

Total:
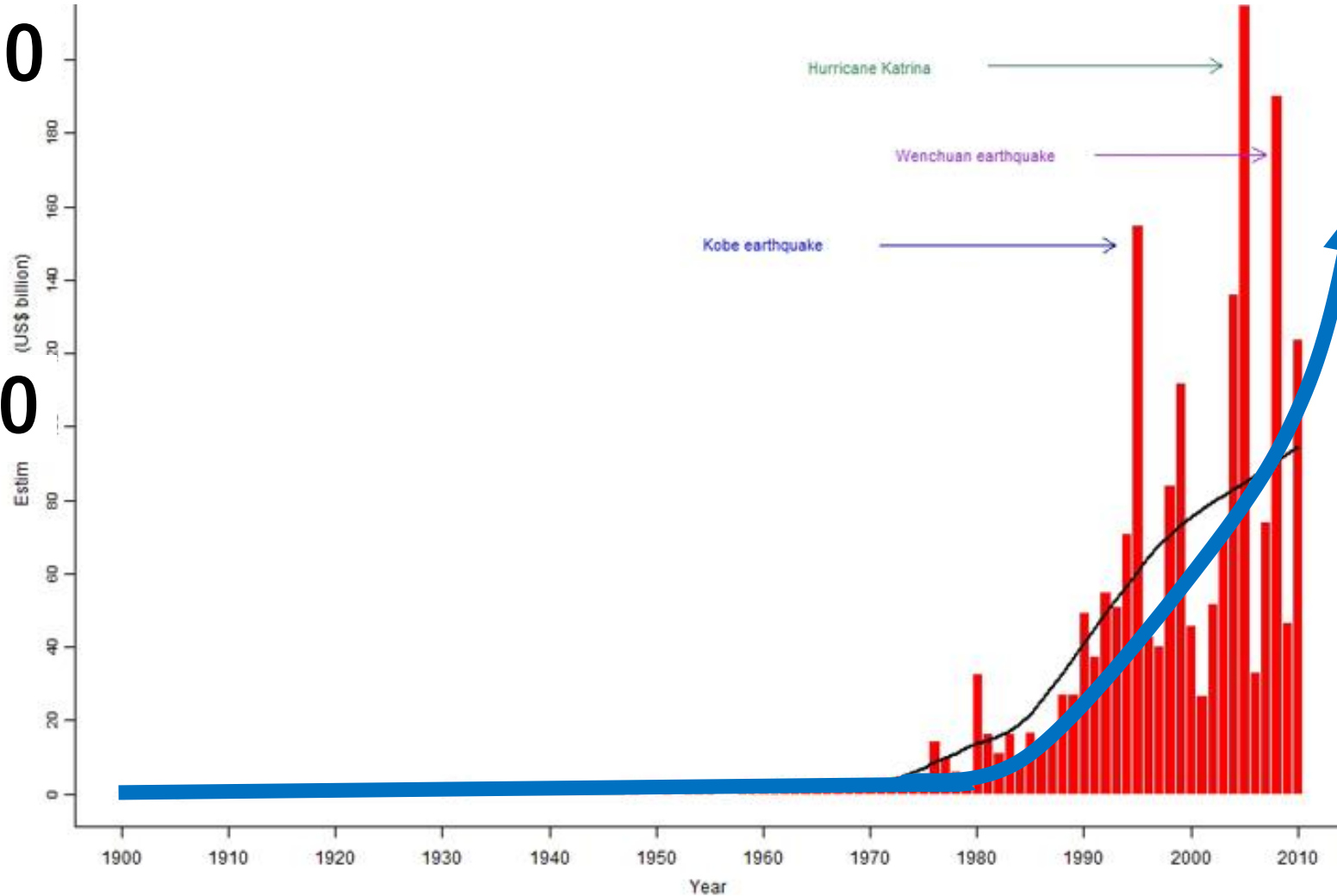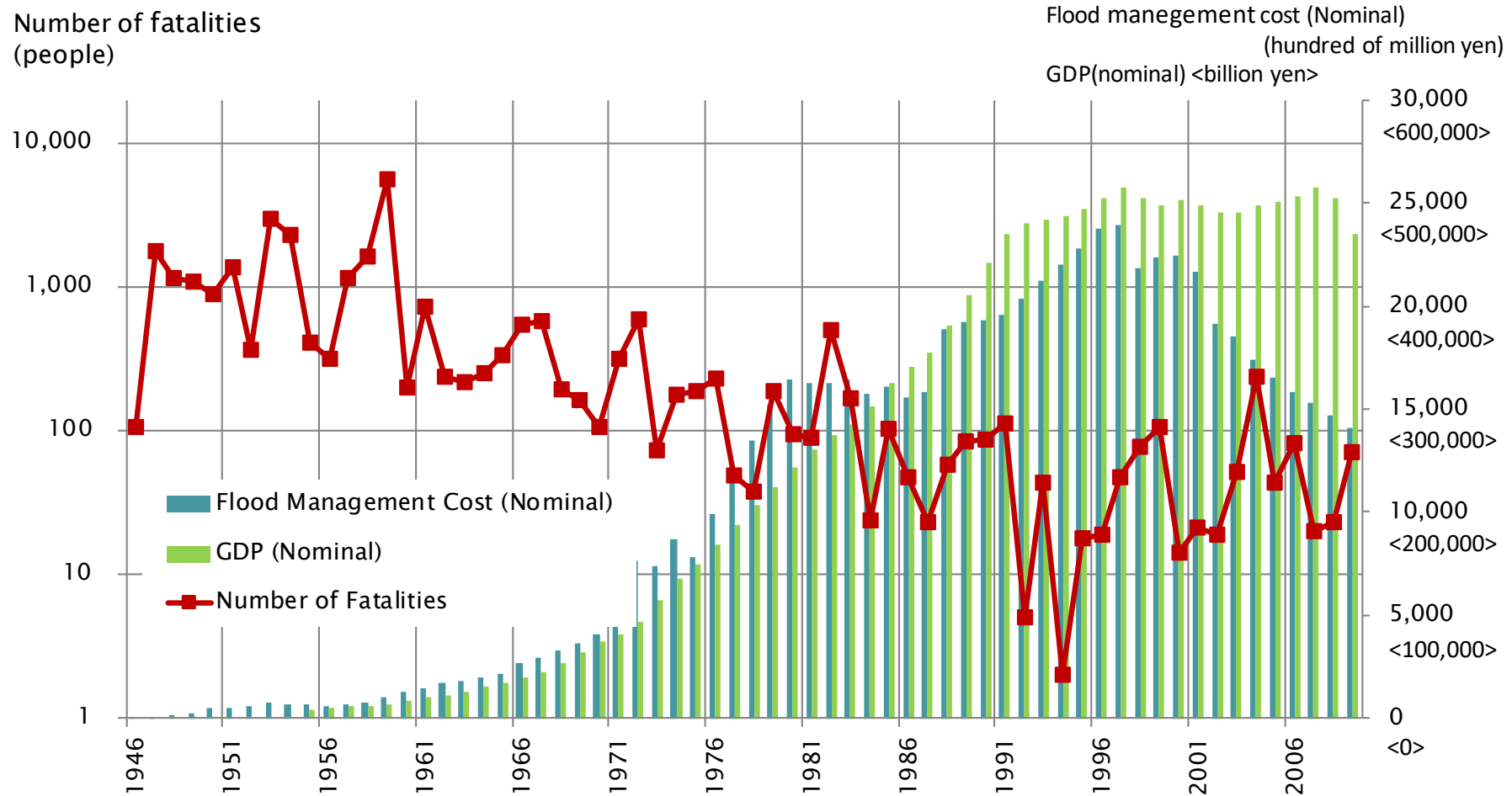**5.7**
billion

Legend:
- Flood
- Drought
- Storm
- Earthquake
- Temperature
- Others

Number of people affected by disasters　（1994-2013)

UNCRD

Estimated damage caused by natural disasters (1900-2010)

Source: ISDR "EM-DAT"

Impact of Flood Management Investment in Japan

Fatalities by Floods , GDP, and Flood Management Budget

*Number of fatalities exclude those who dead by tsunami
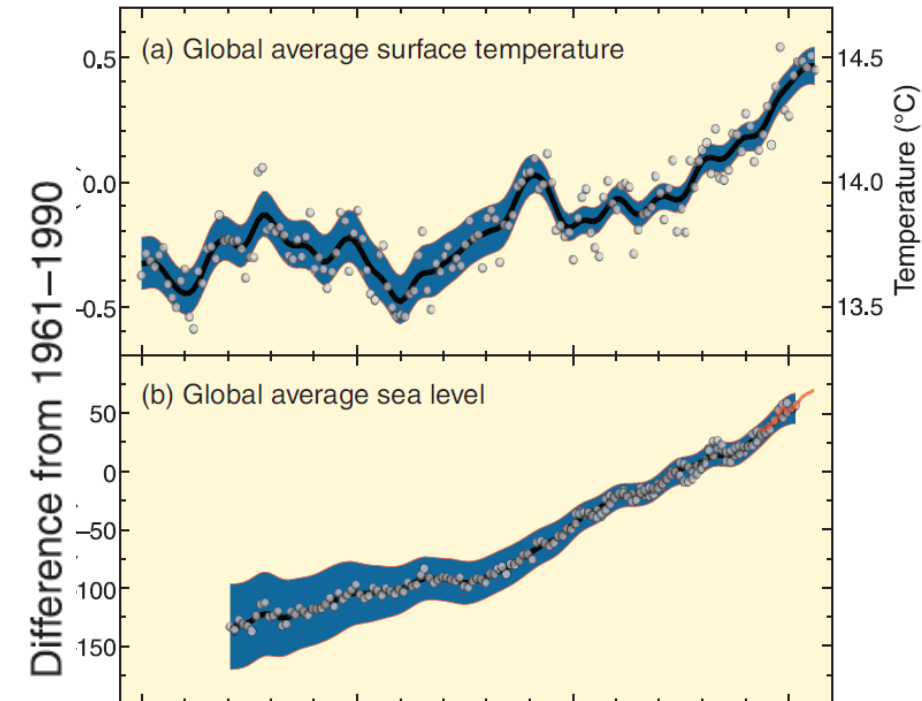*GDP : 1980-2009(2000 price), 1946-1979(1990 price)

Why disasters are increasing?

- The global population growth and urbanization
- Impact of climate change
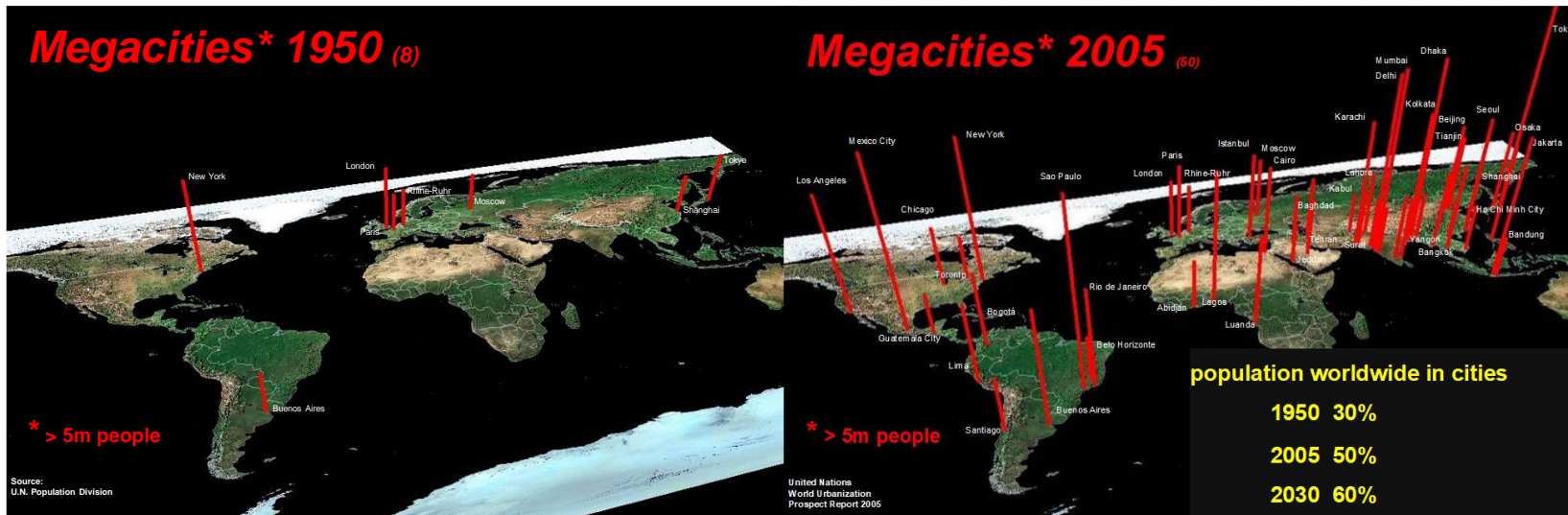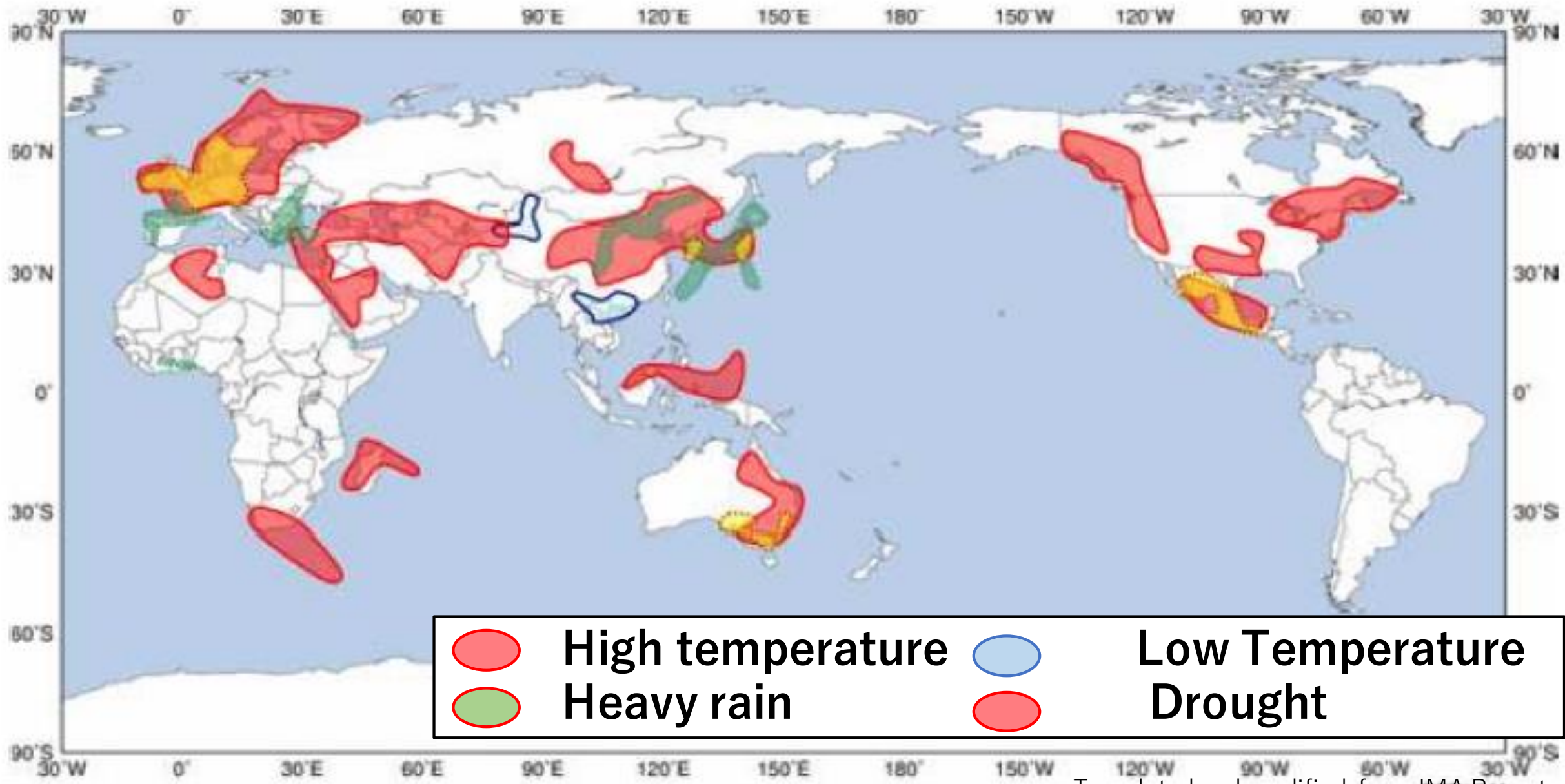 - Rising temperature & sea level

Increase of extreme events

Changes in temperature and sea level

Source: IPCC SR4

Legend:
- High temperature
- Heavy rain
- Low Temperature
- Drought

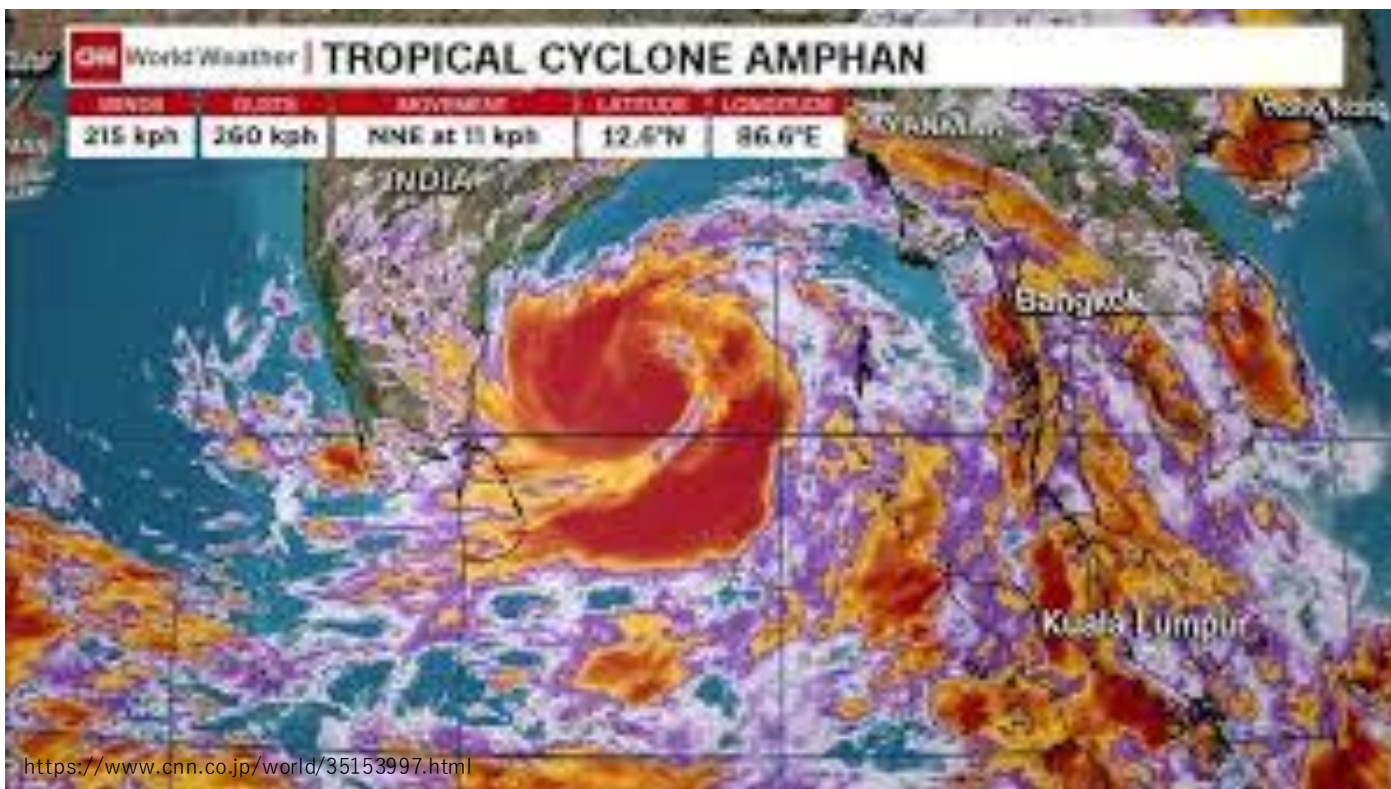Translated and modified from JMA Report, 2018

Unusual Climatic Events events in July 2018

Water-related disasters under COVID-19

CNN World Weather | **TROPICAL CYCLONE AMPHAN**

WINDS	GUSTS	MOVEMENT	LATITUDE	LONGITUDE
215 kph	260 kph	NNE at 11 kph	12.5°N	86.6°E

https://healthpolicy-watch.org/cyclone-amphan-relief-efforts-ramp-up/

https://indianexpress.com/article/india/cyclone-amphan-their-lives-broken-people-in-coastal-areas-say-covid-19-priority-no-more-6421642/
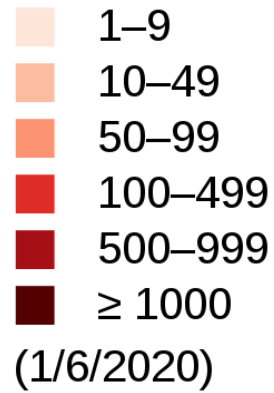
https://healthpolicy-watch.org/cyclone-amphan-relief-efforts-ramp-up/

Cyclone Amphan, 16th-21st May 2020

Tracking Cyclone Amphan

Overlap map of COVID-19 situation dashboard and the cyclone track in West Bengal, India

1–9
10–49
50–99
100–499
500–999
≥ 1000
(1/6/2020)

21st May 2020

20th May 2020

Daily new cases

1 June

20 May
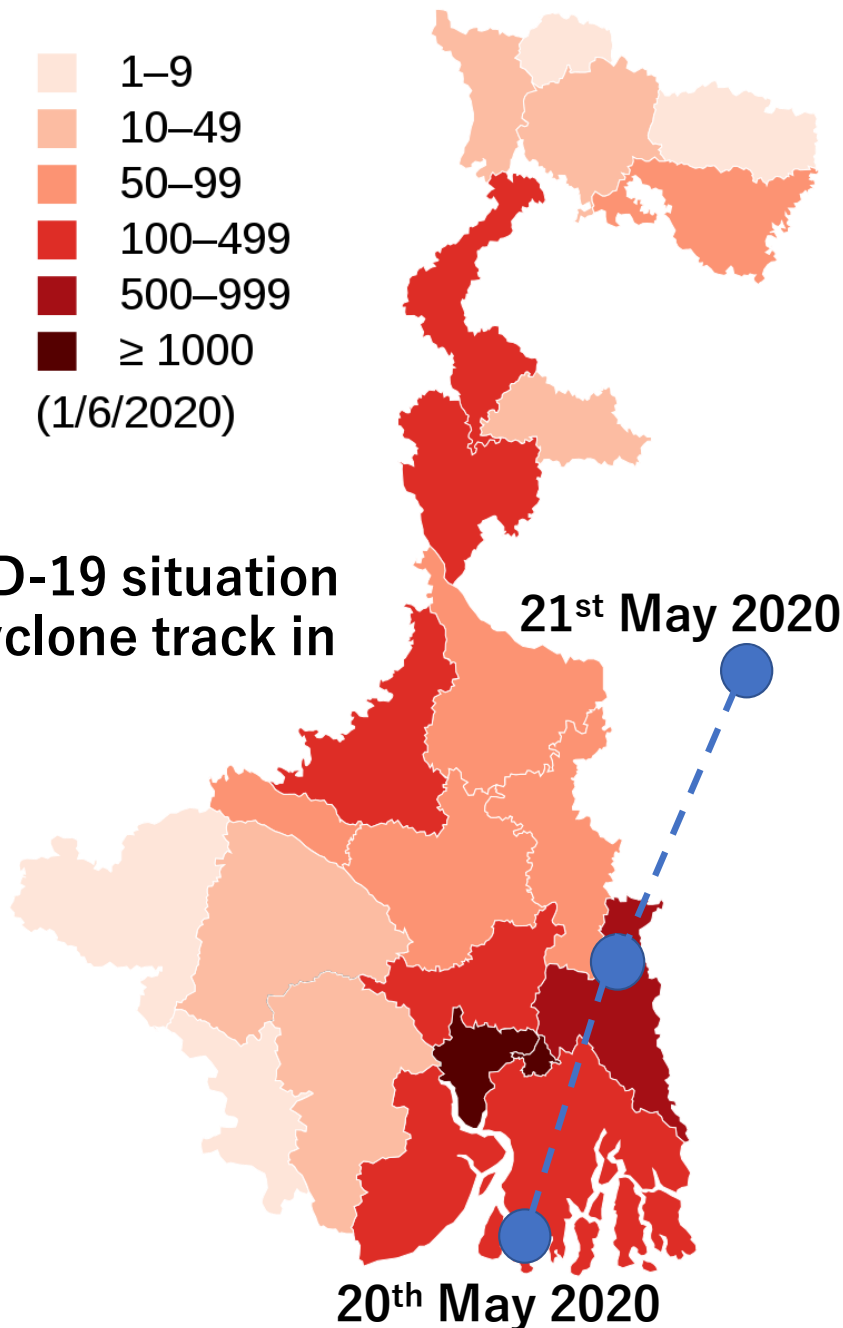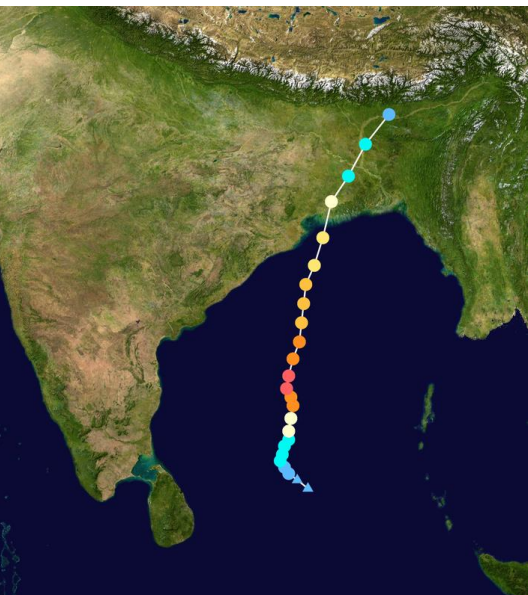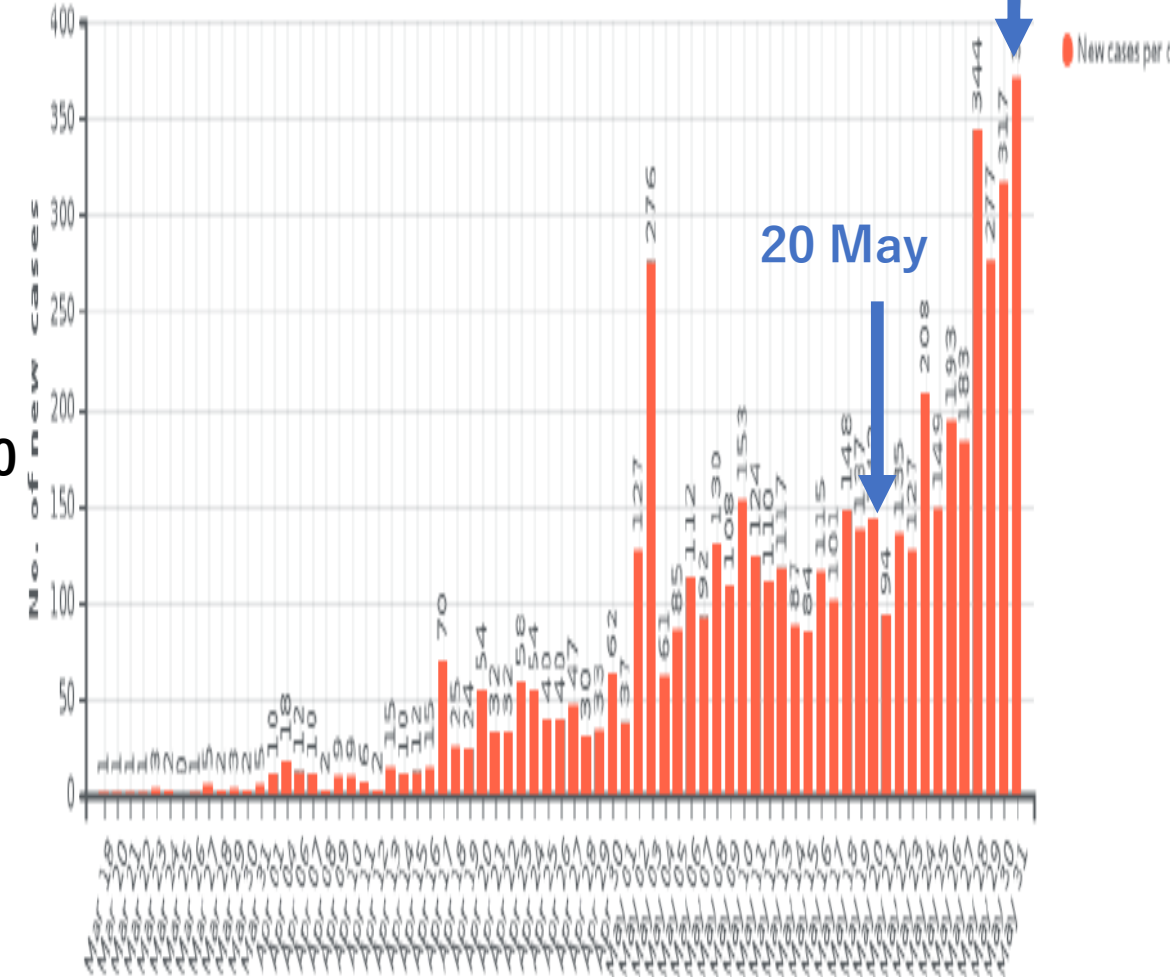
Daily new COVID-19 cases in West Bengal, India (21st March – 1st June)

Epidemic of COVID-19 and Cyclone Amphan in West Bengal, India

Principles to Address Water-related Disaster Risk Reduction (DRR) under the COVID-19 Pandemic

www.wateranddisaster.org

- Leaders, decision makers, and citizens should be aware that Water-related disasters continue to be imminent in countries and cities under the COVID-19 pandemic.

- Disaster Risk Reduction (DRR) strategies and actions specially designed for the current pandemic situation will protect disaster-affected areas from becoming epicenters of pandemic explosion and assist with swift recoveries from disasters.

- The Principles offer practical advice to political leader, managers of DRR and COVID-19 responses, and for all stakeholders to formulate strategies and actions.

- While the Principles address water-related disasters, they are applicable to the other types of disasters as well.

High-level Experts and Leaders Panel on Water and Disasters (HELP)

HOME   BACKGROUND   WHO WE ARE   ANNOUNCEMENTS   MEETING HISTORY   DOCUMENTS   FLAGSHIP INITIATIVES   COVID-19

BACKGROUND
WHO WE ARE
OUR WORK

COVID-19

HELP is committed to address water-related disaster risk reduction under the COVID-19 Pandemic.

In May 2020, HELP created the Principles to address Water-related DRR under the COVID-19 Pandemic and translated the document into different languages.

HELP Principles to address Water-related DRR under the COVID-19 Pandemic

- English (original): Principles to address Water-related DRR under the COVID-19 Pandemic
- Chinese: 新冠肺炎全球大流行期间水相关灾害防灾减灾的处理原则
- French: Principes pour la réduction des risques de catastrophes liées à l'eau (RRC) dans le cadre de la pandémie de COVID-19
- Spanish: Principios para abordar la reducción del riesgo de desastres relacionados con el agua (RRD) bajo la pandemia COVID-19
- Arabic: المتصلة بالمياه في ظل وباء فيروس كورونا (كوفيد-19) (DRR) مبادئ معالجة الحد من مخاطر الكوارث
- Hindi: कोविड-19 महामारी के तहत जल संबंधी आपदा जोखिम न्यूनीकरण (डीआरआर) सिद्धांतों का मसौदा
- Indonesian: Prinsip Konsep untuk Mengatasi Pengurangan Risiko Bencana yang Terkait dengan Air (PRB) dalam Pandemi COVID-19
- Japanese: 新型コロナウイルス感染症大流行下で水関連災害 に対処するための原則

Collection of Critical Situations during Flood Emergency Response

Situations in which local government officers don't know what to do, are confused or in dilemma, etc., during an emergency response effort.

(Appendix)

Cover page

Critical Situations during Flood Emergency Response
(Local government response under COVID-19)

June 2020

Public Works Research Institute (PWRI)
International Centre for Water Hazard and Risk Management
(ICHARM)

UNESCO
United Nations Educational, Scientific and Cultural Organization

ICHARM
International Centre for Water Hazard and Risk Management under the auspices of UNESCO

PWRI
Public Works Research Institute, National Research and Development Agency, Japan

8 Chapters
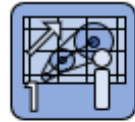
1 Initial Response

2 Headquarters Management

3 Structure in Government Office

4 Collecting Information

5 Collaborating with Stakeholders
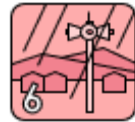
6 Issuing Evacuation Advisory (Alert Level 4), etc.

7 Transmitting Information

8 Shelters

Critical Situations in Flood Damage Response   8   Shelters (designated evacuation space and shelters, etc)

8.11
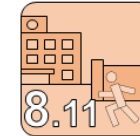
It seems there was an infected person among the evacuees, but we don't know who the high-risk contacts are!

~ Difficulty in grasping who are high-risk contacts ~

Target ● Managers of designated evacuation space and shelters, etc.

Cause and Result

Critical situation point

The public health center informed us that a person who had temporarily evacuated at our shelter later went on to test positive for COVID-19 at the health center. However, we have no record of an evacuee by the name given to us, so we do not know the space allocated to that person.

▶ Result   The high-risk contacts of the infected person are unknown, so evacuees become worried. Also, as the used shelter space is also unclear, the entire shelter has to be disinfected.

Necessary Measures

| Management | Prepare a reception sheet for listing names of evacuees |

- Prepare a reception sheet for recording names of evacuees in readiness for tracing people if it emerges that an evacuee tests positive at a later date, making sure that evacuees write down their names and contact details, and that you record their state of health at time of evacuation, in order to make tracing easier.

| Emergency Response | Distinguish people suspected of being infected at receptions of designated emergency evacuation sites/shelters |

- In disaster response, if a suspected COVID-19 case comes to the designated emergency evacuation site/shelter to evacuate regardless of advance guidance, get that person to make a self-declaration about his/her condition at the entrance reception.
- If implementing space division, record the space to be used by that evacuee and his/her state of health in the reception sheet, so that any people coming into close contact with that evacuee can be traced if necessary.

| Facilities | Stockpile clinical thermometers |

- If evacuation at designated emergency evacuation sites/shelters becomes prolonged, the health of evacuees may change. Therefore, stock up on clinical thermometers in order to distinguish changes in the health of evacuees. As contact from a clinical thermometer may spread the infection, it is best to use a non-contact thermometer.

| Emergency Response | Make evacuees aware of the need to record their health changes |

- Make evacuees aware that they should notify the shelter reception at anytime if their health changes, such as running a high temperature.

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Actions by the Local Government in Japan

Manual for organizing the evacuation facility prepared by Yaizu City

"New normal" for managing the evacuation space

A drill for organization of the evacuation facility in Okazaki City

Information sharing through website in Nara City

Case of Gifu Prefecture in Japan

- Not much is known about COVID-19 yet, but some countermeasures against natural disasters during the pandemic should be prepared.

- "Three Cs" (closed spaces, crowded places, and close-contact settings) should be avoided to prevent the disease from spreading, but evacuation shelters are a typical "3 Cs" environment.

- Natural disaster risk reduction under the COVID-19 pandemic cannot be addressed by sectionalism, but social systems, in general, are built on sectionalism.

- What to do and to be considered is different before, during, and after a disaster.

- What governments, local communities and individuals can do and should consider is different.

VS

- As the first step, we focused on flood disasters and created this guide to propose basic principles.

- We can use hazard maps and meteorological information to evacuate before a flood occurs.

- It is easier to plan countermeasures for floods than for other natural disasters.

清流の国ぎふ 防災・減災センター

16
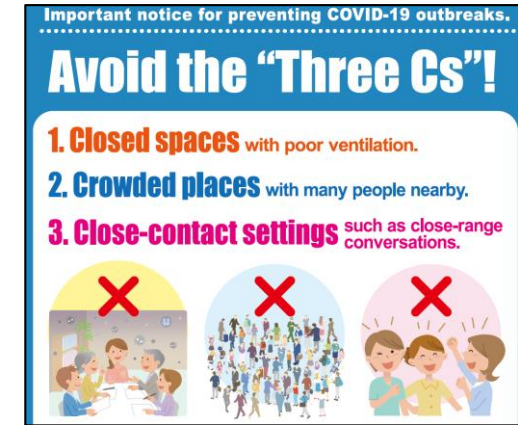
The contents of the guide against flood disasters during COVID-19 pandemic

1. Characteristics of COVID-19 and general measures

2. COVID-19: What has already happened and what is likely to happen in the future

3. Things likely to happen in the event of a natural disaster can occur during the COVID-19 pandemic

4. Basic guidelines for disaster response during the COVID-19 pandemic

5. For individuals

6. For communities

7. For local governments

8. Basic approaches to planning evacuation

9. Basic approaches to evacuation shelter administration

10. Things to be aware of concerning evacuation destinations other than shelters

11. Challenges people will face when seeking to rebuild their lives

Contents

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https://researchmap.jp/multidatabases/multidatabase_contents/detail/228424/9e67ee077cdefd9fbd1e696c2b367b6c?frame_id=1034657

清流の国ぎふ　岐阜大学 GIFU UNIVERSITY

清流の国ぎふ 防災・減災センター

3

Thank you very much

Email: yokota1@un.org