



*TC21 Special Session on JSCE Annual Meeting*

September 6, 13:00-15:00 (Japan Time)

# Evolving Disaster Response Measures during the COVID-19 Pandemic

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# Today's Topics

## Introduction

1. Disaster Response Challenges During a Pandemic
2. Evolving Disaster Response Practices During a Pandemic





## 0. Introduction



# About Asian Disaster Reduction Center (ADRC)



## **Established: July 1998**

- 1) To Enhance Disaster Resilience of the Member Countries
- 2) To Build Safe Communities
- 3) To Create a Society Where Sustainable Development is Possible

### **Information Sharing**

Implementation of International Conferences  
Provision of Information on the Latest Disasters, Disaster Preparedness of Member Countries, and Good Practices  
Promotion of GLIDE (Global unique disaster IDentifier)  
Promotion of a Disaster Risk Management System using Earth Observation Satellites Data

### **Human Resource Development**

Implementation of DRR Seminar and Training  
Program for Inviting Visiting Researchers from Member Countries

### **Building Community Capabilities**

Development and Dissemination of Tools for Encouraging Community Participation  
Support for the Activities of Asian Disaster Reduction and Response Network (ADRRN)

### **Cooperation with Relevant Organizations**

DRR Policy Peer Review in Cooperation with Member Countries  
Promotion of Sub-regional DRM Cooperation



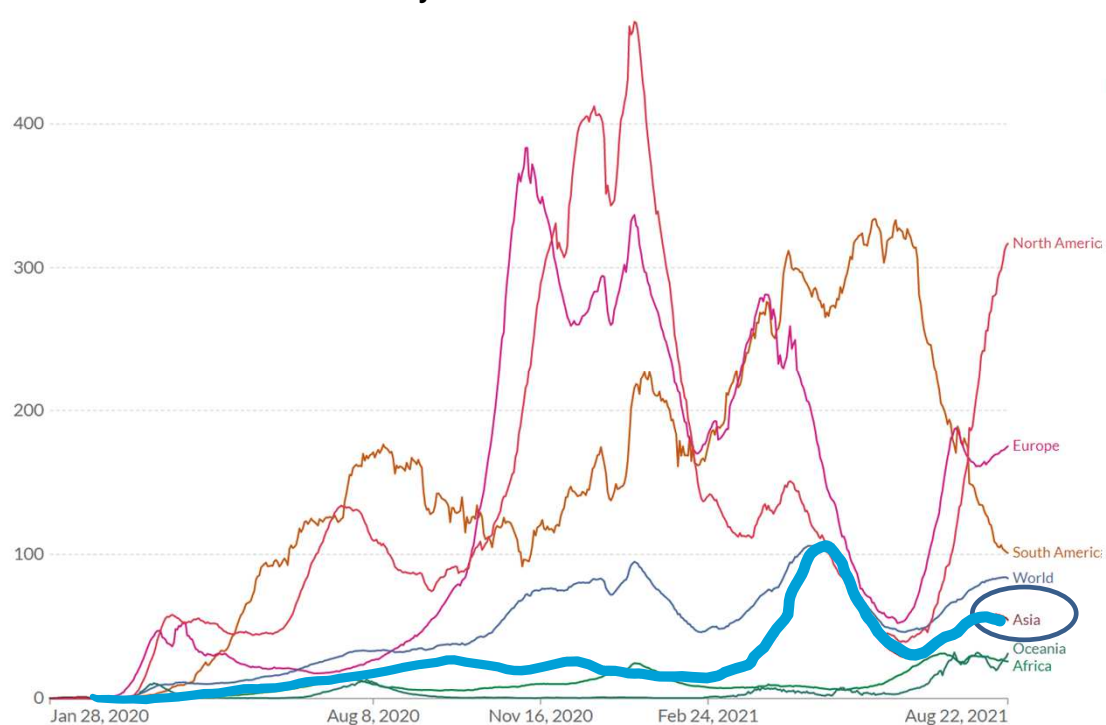




## Daily new confirmed COVID-19 cases/deaths per million people in each region (As of 22 August 2021)

**COVID-19 infection and mortality rates in Asia have been lower than the world average.**

Daily new confirmed cases



Daily new confirmed deaths



Source: Our World in Data, <https://ourworldindata.org/coronavirus-data-explorer>







# ADRC Desk Survey: Indicative Variations of COVID-19 Countermeasures

(As of 12 February 2021)

Member Country	Containment			Mitigation					Support		Websites of Health Agency and COVID-19 Tracker
	BR	L	LR	HS	TT	SD	M	V	CA	EA	
1. Armenia	O	O	-	-	-	O	O	X	*	*	<a href="https://ncdc.am/coronavirus/confirmed-cases-by-days/">https://ncdc.am/coronavirus/confirmed-cases-by-days/</a>
2. Azerbaijan	O	O	-	-	-	O	O	-	O	O	<a href="https://koronavirusinfo.az/az">https://koronavirusinfo.az/az</a>
3. Bangladesh	O	O	-	X	X	O	O	X	O	O	<a href="http://corona.gov.bd/">http://corona.gov.bd/</a>
4. Bhutan	O	O	-	-	-	O	O	X	*	*	<a href="http://www.moh.gov.bt/">http://www.moh.gov.bt/</a>
5. Cambodia	O	X	O	X	X	O	O	X	*	*	<a href="http://www.cdcmoh.gov.kh/">http://www.cdcmoh.gov.kh/</a>
6. China	O	O	-	O	O	O	O	O	O	O	<a href="http://en.nhc.gov.cn/">http://en.nhc.gov.cn/</a>
7. India	O	O	-	O	-	O	O	-	O	O	<a href="https://www.mohfw.gov.in/">https://www.mohfw.gov.in/</a>
8. Indonesia	O	O	-	-	-	O	O	-	O	O	<a href="https://covid19.kemkes.go.id/">https://covid19.kemkes.go.id/</a> <a href="https://covid19.go.id/">https://covid19.go.id/</a> <a href="http://covid19.bnpb.go.id/">http://covid19.bnpb.go.id/</a>
9. Iran	O	O	-	O	-	O	O	-	O	O	<a href="http://behdasht.gov.ir">behdasht.gov.ir</a>
10. Japan	O	X	O	O	O	O	O	O	O	O	<a href="https://www.mhlw.go.jp/index.html">https://www.mhlw.go.jp/index.html</a>
11. Kazakhstan	O	O	-	-	-	O	O	-	O	O	<a href="https://www.coronavirus2020.kz/kz">https://www.coronavirus2020.kz/kz</a>
12. Kyrgyzstan	O	O	-	-	-	O	O	-	*	*	<a href="http://www.med.kg/ru/informatsii.html">http://www.med.kg/ru/informatsii.html</a>
13. Laos	O	O	-	-	-				*	*	<a href="https://www.moh.gov.la/index.php/lo-la/">https://www.moh.gov.la/index.php/lo-la/</a>
14. Malaysia	O	O	-	O	-	O	O	-	O	O	<a href="http://www.moh.gov.my/index.php/view/2019-nCoV-umh">http://www.moh.gov.my/index.php/view/2019-nCoV-umh</a> <a href="https://ukkdosm.github.io/covid-19">https://ukkdosm.github.io/covid-19</a>

Legend: O = Implemented; X = not implemented; \* = Borrowed from lending organizations; - = to be researched further

【Countermeasures】 BR: Border Control, L: Lockdown, LR: Limited Restrictions (stay home, etc.), HS: Strengthening of Health System, TT: Tracing and Testing, SD: Social Distancing, M: Wearing of Mask, V: Vaccine research and trials, CA: Cash Assistance to citizens, EA: Economic Aid to businesses







## ADRC Desk Survey: Indicative Variations of COVID-19 Countermeasures (Cont.)

(As of 12 February 2021)

Member Country	Containment			Mitigation					Support		Websites of Health Agency and COVID-19 Tracker
	BR	L	LR	HS	TT	SD	M	V	CA	EA	
15. Maldives	O	O	-	-	-	O	O	-	*	*	<a href="https://covid19.health.gov.mv/en">https://covid19.health.gov.mv/en</a>
16. Mongolia	O	O	-	-	-	O	O	-	*	*	<a href="https://zasag.mn/en/m/ministry-of-health">https://zasag.mn/en/m/ministry-of-health</a>
17. Myanmar	O	O	-	-	-	O	O	-	O	O	<a href="https://www.mohs.gov.mm/">https://www.mohs.gov.mm/</a>
18. Nepal	O	O	-	-	-	O	O	-	*	*	<a href="https://mohp.gov.np/en/">https://mohp.gov.np/en/</a> <a href="http://www.moha.gov.np/">http://www.moha.gov.np/</a>
19. Pakistan	O	O	-	-	-	O	O	-	*	*	<a href="http://covid.gov.pk/">http://covid.gov.pk/</a>
20. PNG	O	O	-	-	-	O	O	-	*	*	<a href="https://www.health.gov.pg/">https://www.health.gov.pg/</a>
21. Philippines	O	O	O	O	X	O	O	X	O	O	<a href="https://ncovtracker.doh.gov.ph/">https://ncovtracker.doh.gov.ph/</a> <a href="http://www.covid19.gov.ph/">http://www.covid19.gov.ph/</a>
22. Republic of Korea	O	X	O	O	O	O	O	O	O	O	<a href="http://ncov.mohw.go.kr/en">http://ncov.mohw.go.kr/en</a>
23. Russia	O	O	-	-	-	O	O	-	O	O	<a href="http://stopkoronavirus.rf">stopkoronavirus.rf</a>
24. Singapore	O	O	-	O	O	O	O	O	O	O	<a href="https://www.moh.gov.sg/covid-19">https://www.moh.gov.sg/covid-19</a>
25. Sri Lanka	O	O	-	-	X	O	O	X	*	*	<a href="http://epid.gov.lk/">http://epid.gov.lk/</a>
26. Tajikistan	O	-	O	-	-	-	-	X	*	*	<a href="http://moh.tj/?lang=en">http://moh.tj/?lang=en</a>
27. Thailand	O	O	O	O	-	O	O	-	O	O	<a href="https://ddc.moph.go.th/viralpneumonia/eng/index.php">https://ddc.moph.go.th/viralpneumonia/eng/index.php</a>
28. Turkey	O	O	O	O	-	O	O	O	O	O	<a href="https://www.saglik.gov.tr/?_Dil=2">https://www.saglik.gov.tr/?_Dil=2</a>
29. Uzbekistan	O	O	O	-	-	O	O	-	*	*	<a href="https://www.minzdrav.uz/en/">https://www.minzdrav.uz/en/</a>
30. Vietnam	O	O	-	O	X	O	O	-	O	O	<a href="https://www.moh.gov.vn/en_US/web/ministry-of-health">https://www.moh.gov.vn/en_US/web/ministry-of-health</a>
31. Yemen	O	-	-	-	-	-	-	-	-	-	<a href="http://www.moh.gov.ye/">http://www.moh.gov.ye/</a>





# Asian Conference on Disaster Reduction: ACDR

- **Purpose:** Information sharing on DRM and DRR among member countries and relevant organizations, and strengthening cooperation among them.
- **Annual event**

## Asian Conference on Disaster Reduction 2020

Can we adapt to the New Normal? -Approaches from Asia-

**Date:** 20-22 October 2020

**Theme:**

- 1) Disaster Risk Reduction (DRR) Measures and Challenges to the Intensifying Natural Disasters
- 2) Disaster Preparedness and Response Measures Amidst COVID-19

Please visit <https://acdr.adrc.asia/> for more details!



ACDR2019 (@Ankara, Turkey)



ACDR2020 (Online)





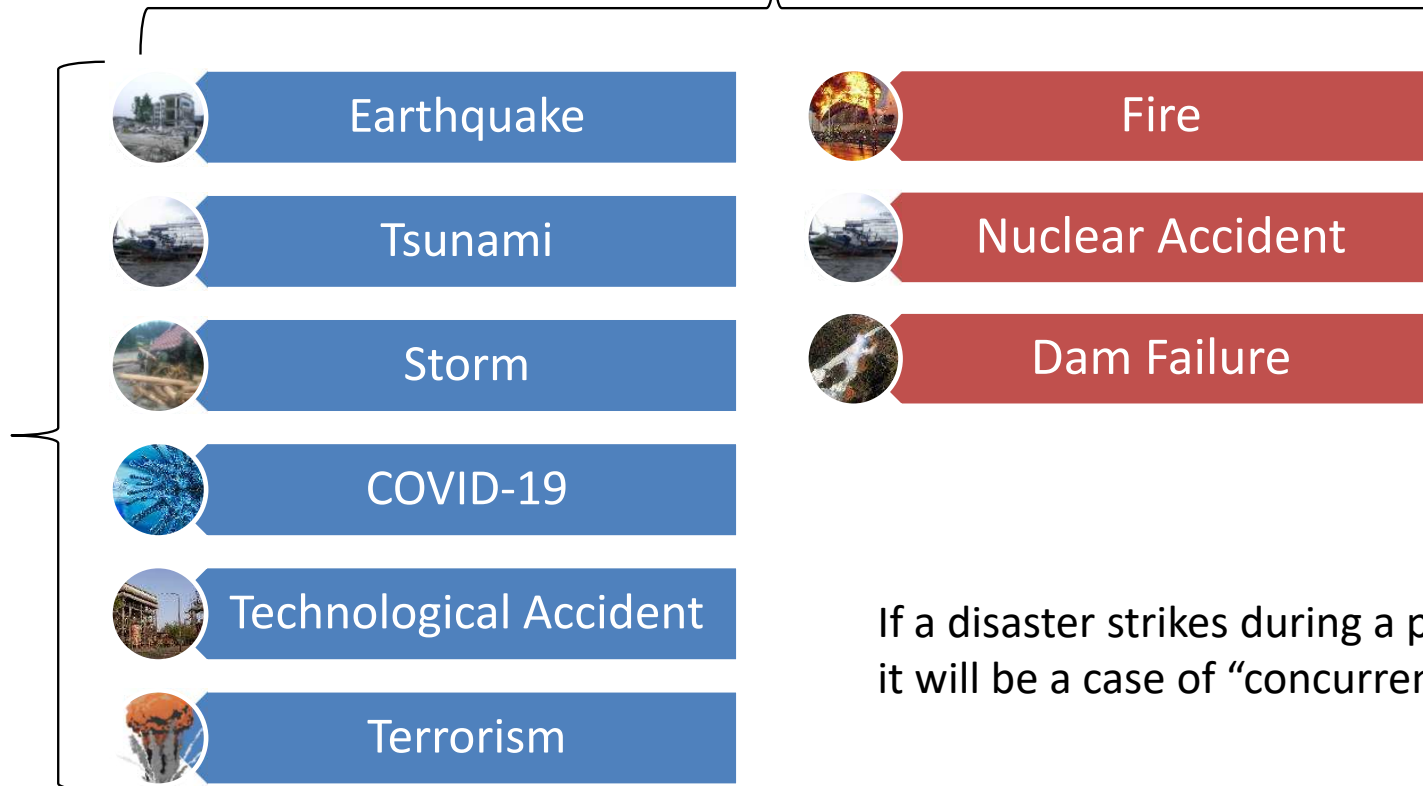
## 1. Disaster Response Challenges During a Pandemic



# A Case of “Concurrent Crises”

## Compound/Cascading Disaster

Concurrent Crises



If a disaster strikes during a pandemic, it will be a case of “concurrent crises”.





# Sample Cases



## Triple-Disaster

Great East Japan Earthquake (11 March 2011)

(1) Earthquake



(2) Tsunami



(3) Nuclear  
Power Plant  
Failure



## Simultaneous Disaster + COVID-19

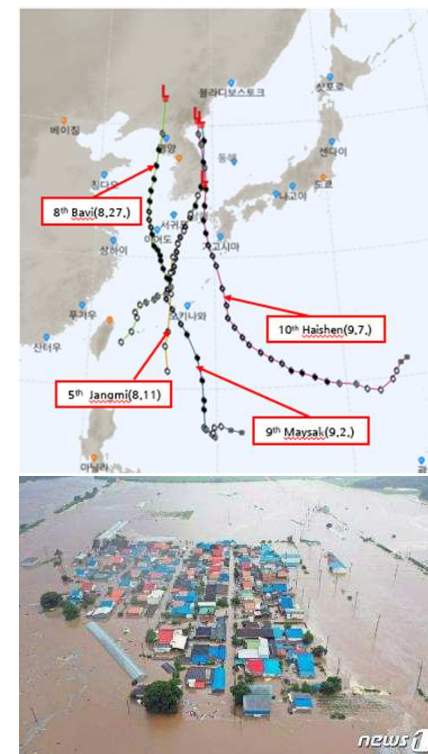
2020 Summer in Republic of Korea



Heat Waves



Volunteer Works



Heavy Rainfall and Typhoons



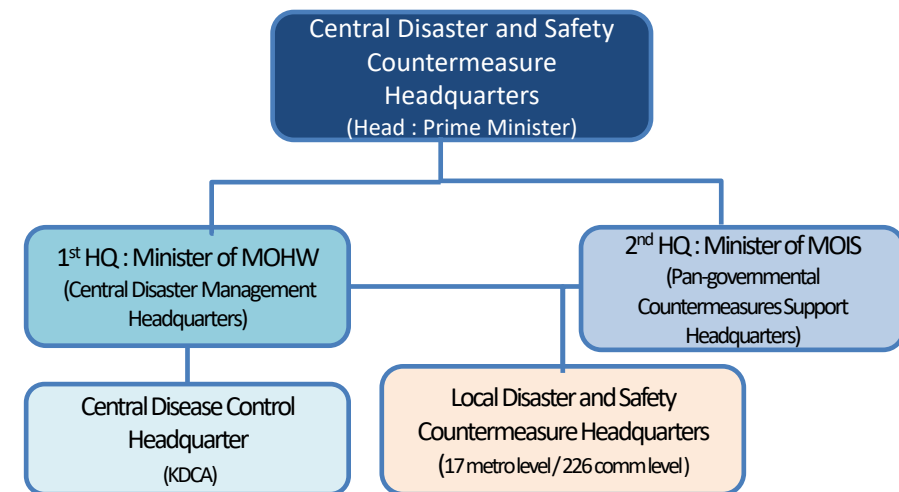
Asian Disaster Reduction Center



# 1-1 Administrative Challenges

	Lead Agencies/ Organization	Countries
Type 1	Task Force (i.e., presided by a President or Prime Minister)	Japan Myanmar Republic of Korea Vietnam
Type 2	Health Agency (e.g., Ministry of Health)	Cambodia Fiji Papua New Guinea Philippines Singapore
Type 3	DRM Agency (e.g., National Disaster/Emergency Management Authority)	Indonesia New Zealand Samoa Tonga Vanuatu

What is the roles and responsibilities of **DRM agency** in responding to COVID-19 outbreaks at both national and sub-national levels?



Emergency Headquarters for COVID-19, Heavy Rainfall, and Typhoons in the Republic of Korea

Source: "Adapting Disaster Risk Management Systems for Health-Related Emergencies: Early Lessons from the Asia-Pacific Region", World Bank, October 2020





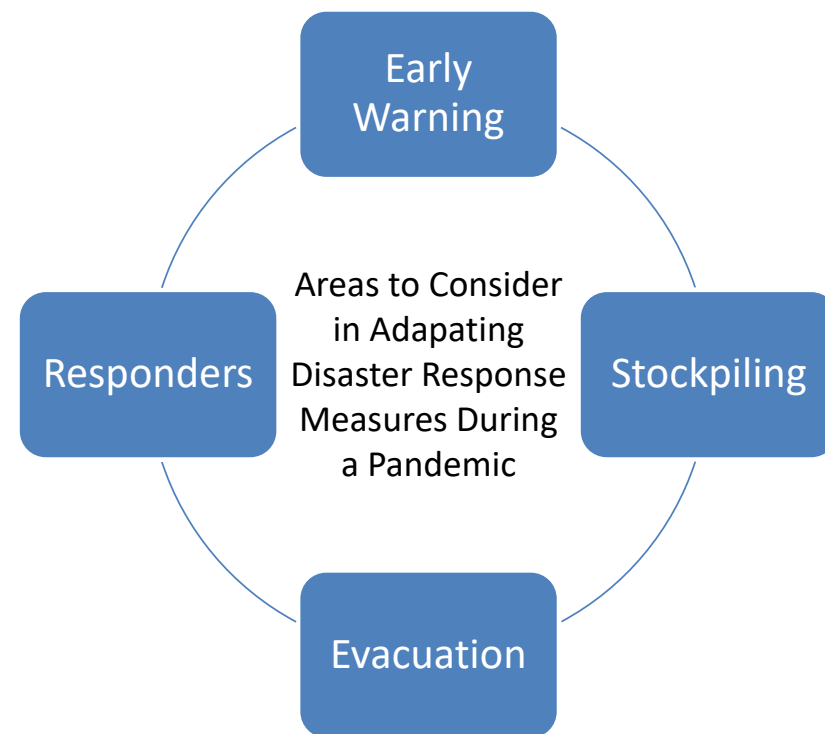
# 1-2 Readiness of Disaster Response Systems

Is the existing disaster response system ready during a pandemic?

considering:

- ✓ Movement/travel restrictions
- ✓ Testing and tracing
- ✓ Social distancing
- ✓ Hygienic practices (e.g., washing with water and soap or use of disinfectants)
- ✓ Protective gears (e.g., facemasks, coverings, and PPEs)

Source: Concept Note of Thematic Session 2, (ACDR 2020)



Need Review Disaster Response Protocols and SOPs

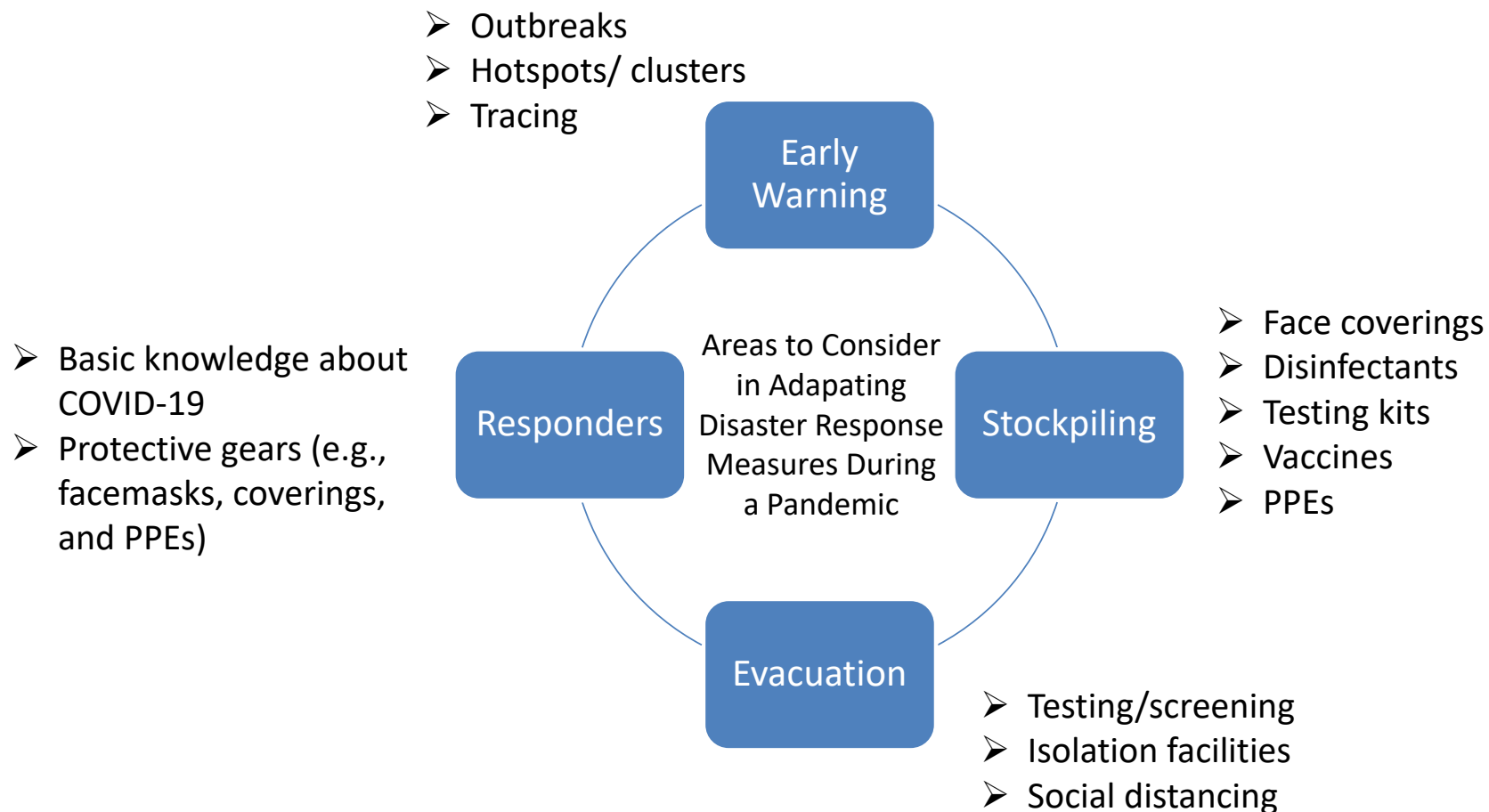




## 2. Evolving Disaster Response Practices During a Pandemic



# Adaptation of Disaster Response During a Pandemic





# 2-1 Digitalization



## Case of India

### GIS based DSS Platform

Information on Covid-19 cases, logistics, resources & surveillance



Source: <https://gis-dm.ndma.gov.in/portal/apps/sites/#/covid>

- ✓ Visualization of quarantined person due to COVID-19: tracking of locations from source to destination

### Human Mobility Monitoring Using Telecom Data



- ✓ Real time monitoring: tracking of in-migrants across the country





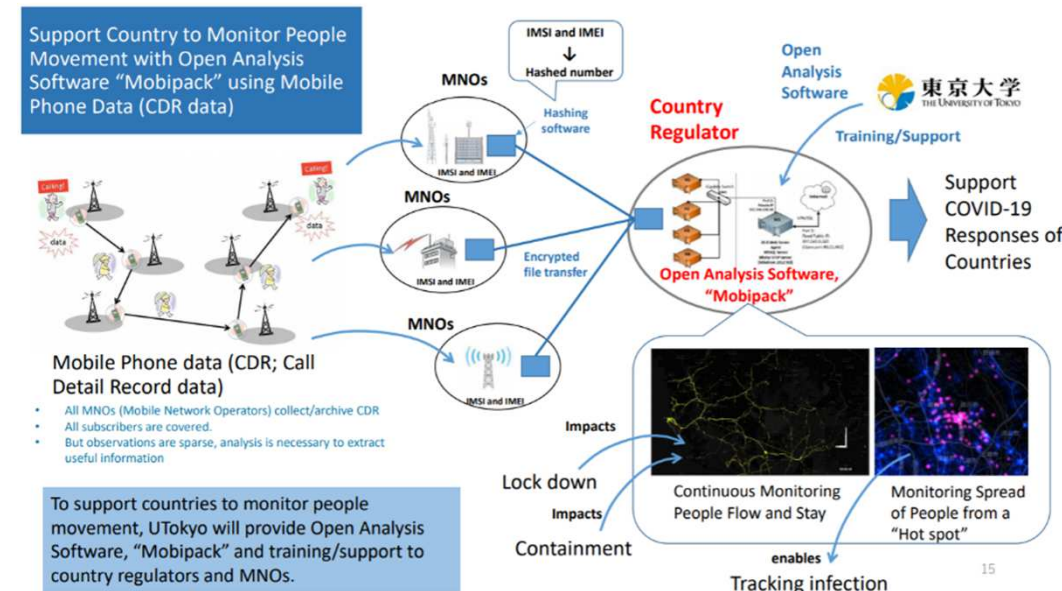
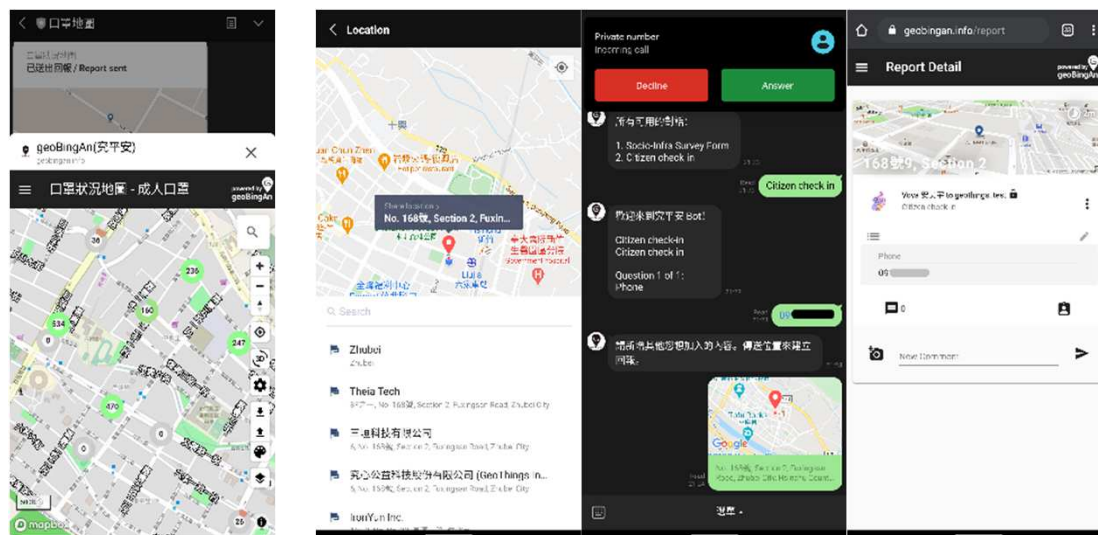
## 2-1 Digitalization (Cont.)



GeoThing



The University of Tokyo



Using existing tool for the effective information dissemination of the mask status in pharmacy

Using phone call data to monitor people movement

Source: <https://geobingan.info/landing>

Source: <https://sdc.csis.u-tokyo.ac.jp/>



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Case of the Philippines

## 2-2 Dispersed Evacuation

### Segregation:

Suspected COVID-19 cases were segregated from the evacuation area



### Clustering:

Occupants of the evacuation room must be either members of one family or people who know each other from the same neighborhood



### Separate Facility:

Separate facilities were designated to take care of suspected COVID-19 cases



### Management:

No media is allowed at the emergency operations center for getting information



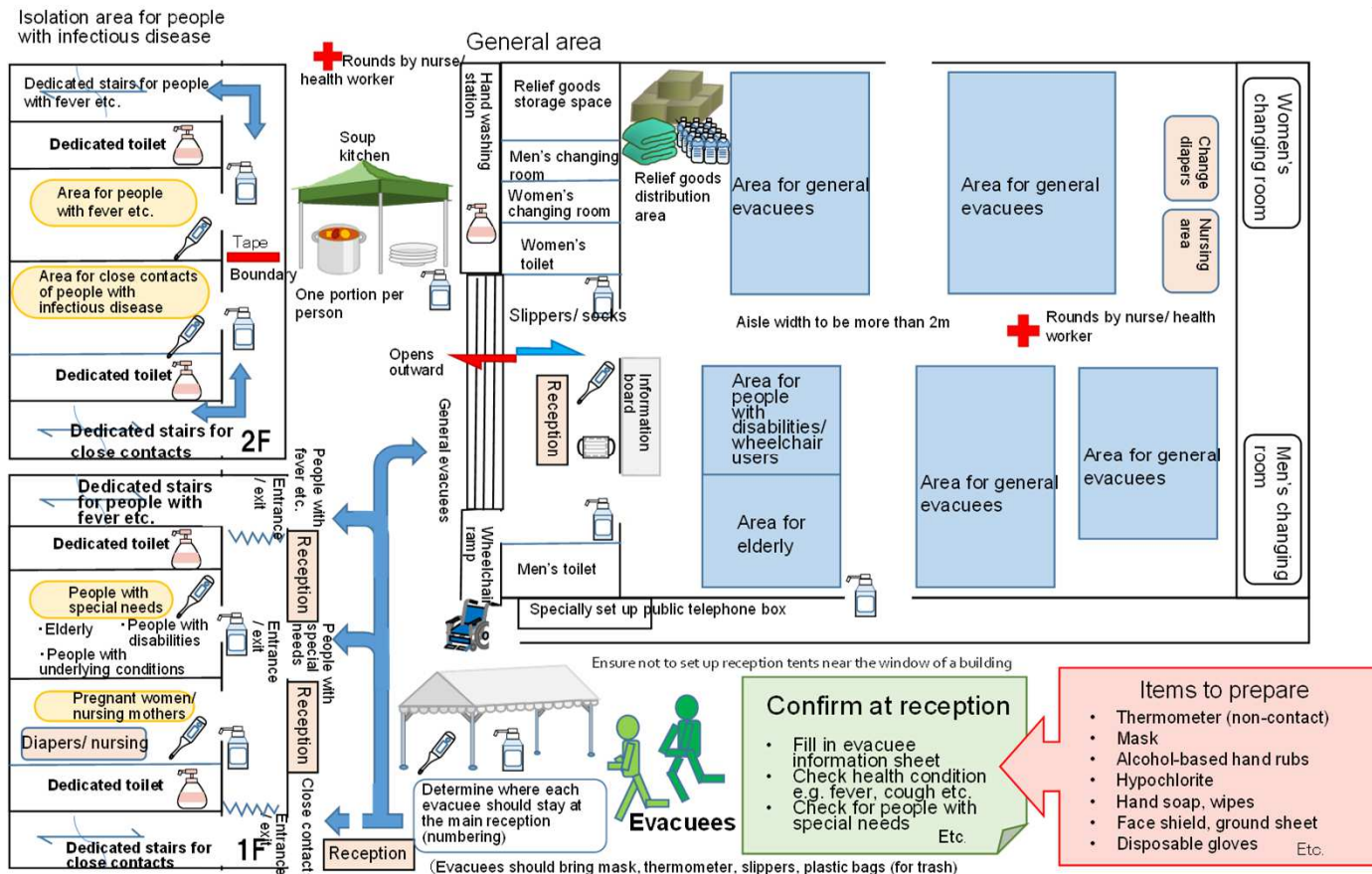


## 2-2 Dispersed Evacuation (Cont.)



### Case of Japan

The height of a partition should be higher than the breathing zone of a user when seated, in order to prevent respiratory droplet transmission. Each block should be at least 1m apart.



\* It is preferable to implement all the above measures. However, during a disaster number of constraints can be expected. Operational staff are expected to do their best within such constraints.





## 2-2 Dispersed Evacuation (Cont.)

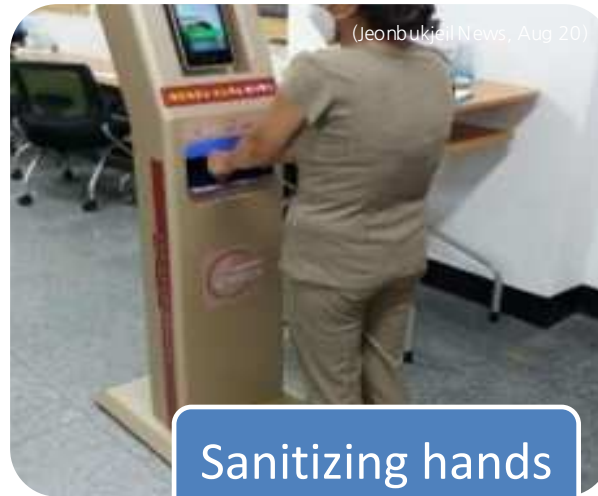


### Case of Republic of Korea



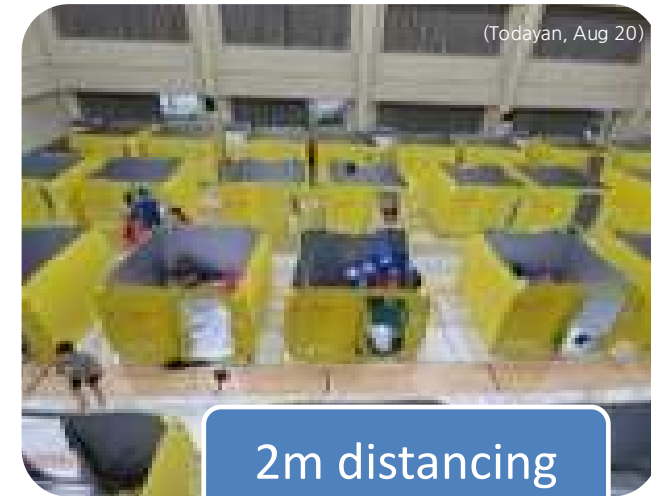
(Healthcare News, Aug 20)

Temperature  
Checks



(Jeonbukjeil News, Aug 20)

Sanitizing hands  
to get an access



(Todayan, Aug 20)

2m distancing  
between tents

Operation of shelter based on the guideline for management of cooling centers, temporary shelters, earthquake evacuation areas (Enacted in June 2020)

Source: Ministry of the Interior and Safety, Republic of Korea





Thank you for your attention!





# Main References

Presentations in the ACDR 2020 from the following organizations

- Cabinet Office, Japan
- Ministry of the Interior and Safety, Republic of Korea
- National Disaster Risk Reduction and Management Authority, Ministry of Home Affairs, Nepal
- Office of Civil Defense (OCD), Department of National Defense, Republic of the Philippines
- Singapore Civil Defence Force (SCDF), Singapore
- University of Tokyo
- GeoThings Inc.

Others

- Global Facility for Disaster Reduction and Recovery (GFDRR), World Bank

