



**THE FUTURE OF
GLOBAL
DISASTER
RISK REDUCTION**

Disaster Public Health in Megacities

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STRENGTHENING THE RESILIENCE of MEGACITIES THROUGH SCIENCE, TECHNOLOGY & INNOVATION

Concept of Disaster Medicine

- Emergency Medicine

Resource > Needs

- Disaster Medicine

Resource << **Needs**

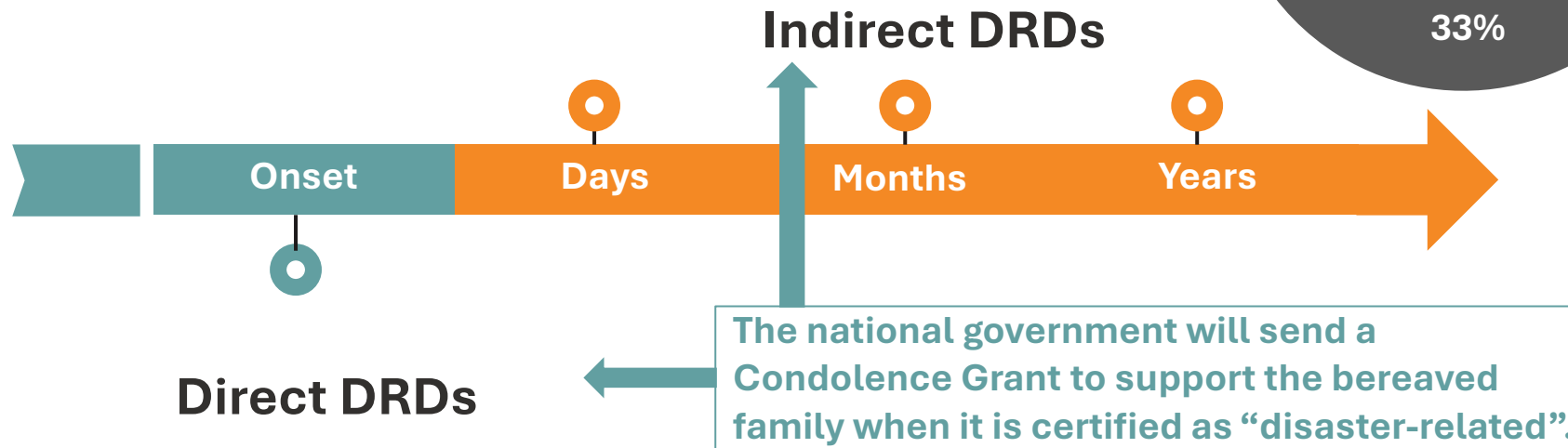
- Disaster Medicine in Megacities

Resource <<< **Needs**

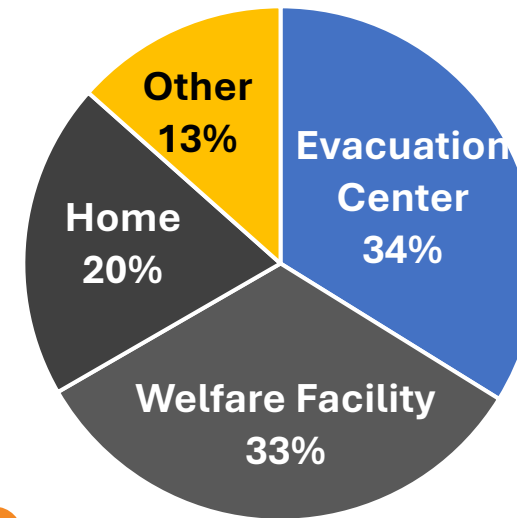


Indirect Disaster-Related Deaths (DRDs)

Deaths by physical and mental exhaustion, including suicides or worsening of health condition due to the **evacuation, relocation, disruption of healthcare service, and loss of property, livelihood, and the community.**

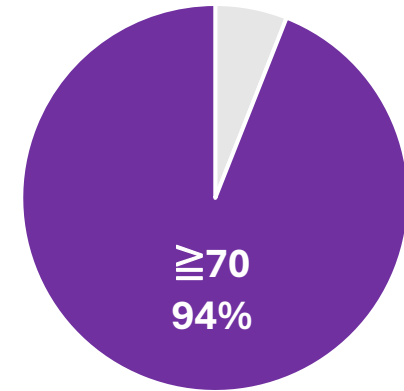


Place of Occurrence



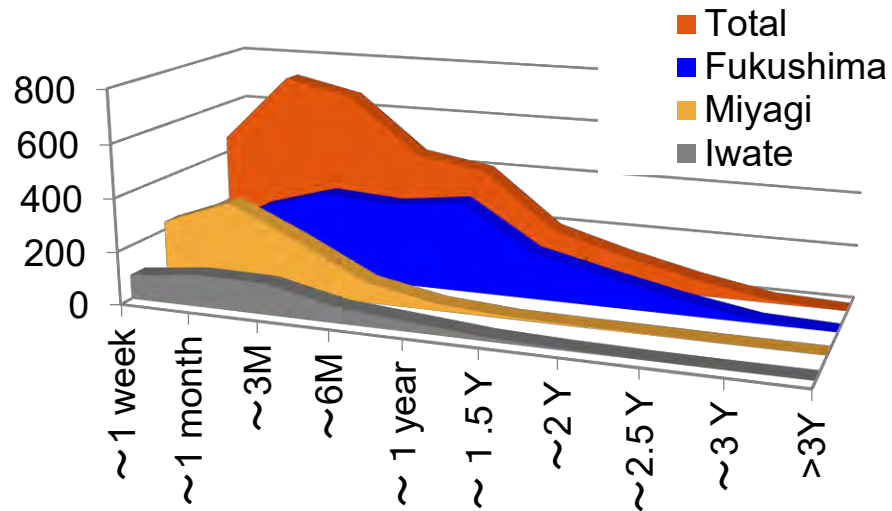
After Noto Eq.

Age



Indirect Disaster-Related Deaths

After GEJE

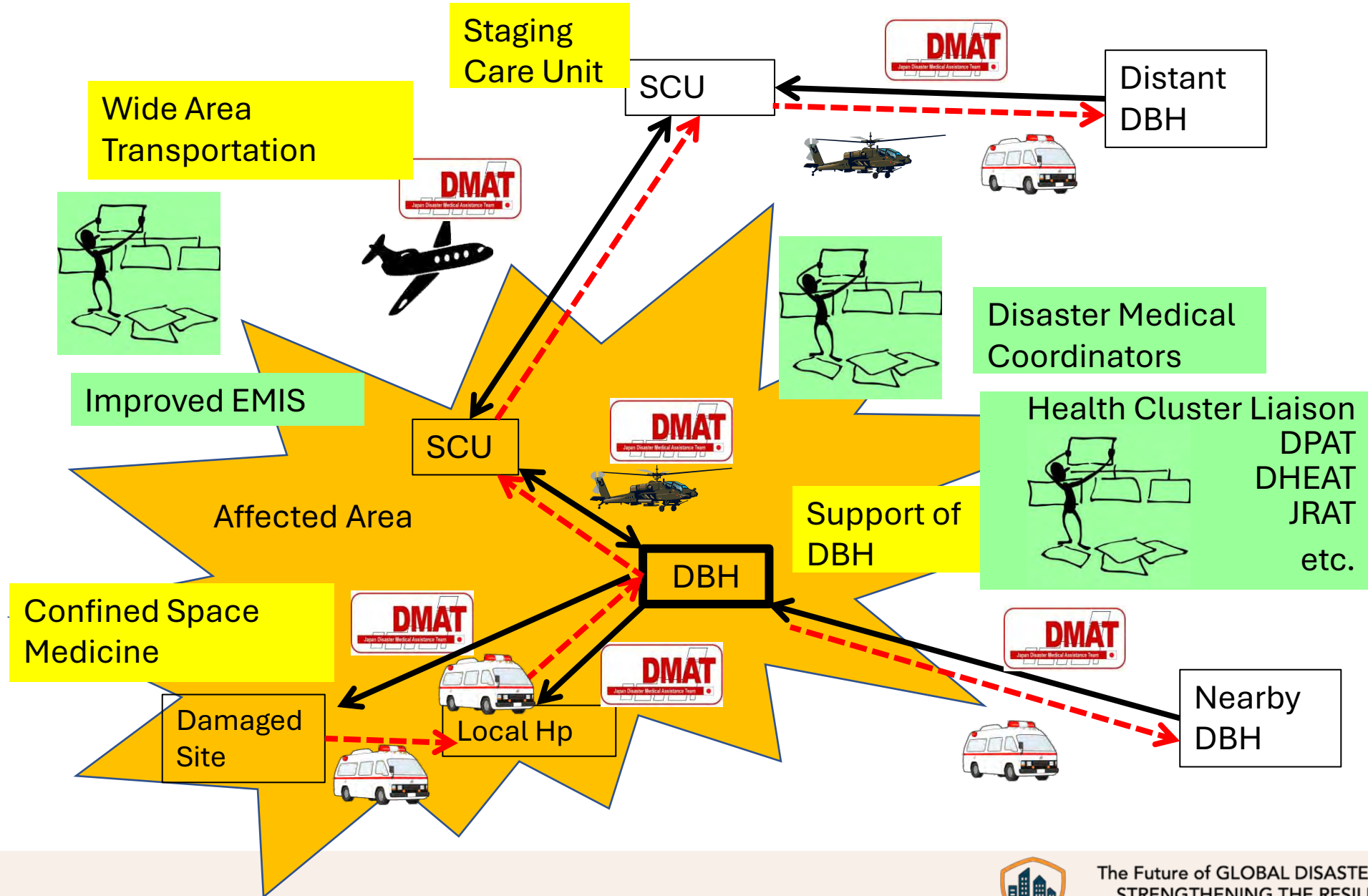


n=3,089 (as of Mar. 31, 2014)
Ministry of Reconstruction

Year	Disaster	Disaster-Related		Total
		Direct Deaths	Indirect Death	
1995	GHAIE	5,520	912	6,432
2004	Niigata Chuetsu Earthquake	16	52	68
2011	GEJE	18,425	3,789	22,214
2016	Kumamoto Earthquake	55	218	273
2018	Western Japan Heavy Rain Disaster	221	83	304
2018	Hokkaido Iburi Eastern Earthquake	41	3	44
2019	Typhoon Hagibis Disaster	97	7	104
2024	Noto Peninsula Earthquake (As of May 30, 2025)	229	372	601

These deaths were officially certified for the Condolence Grant and do not cover all indirect deaths.

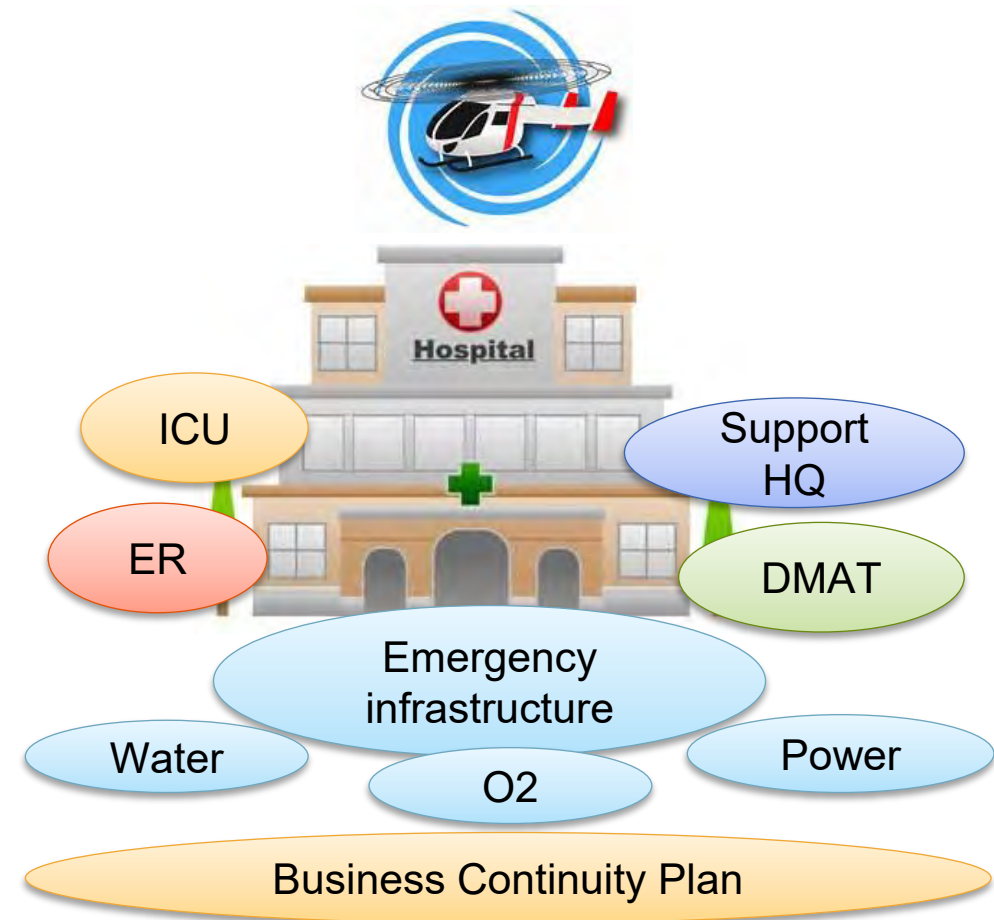
Improved National Disaster Medical System in Japan



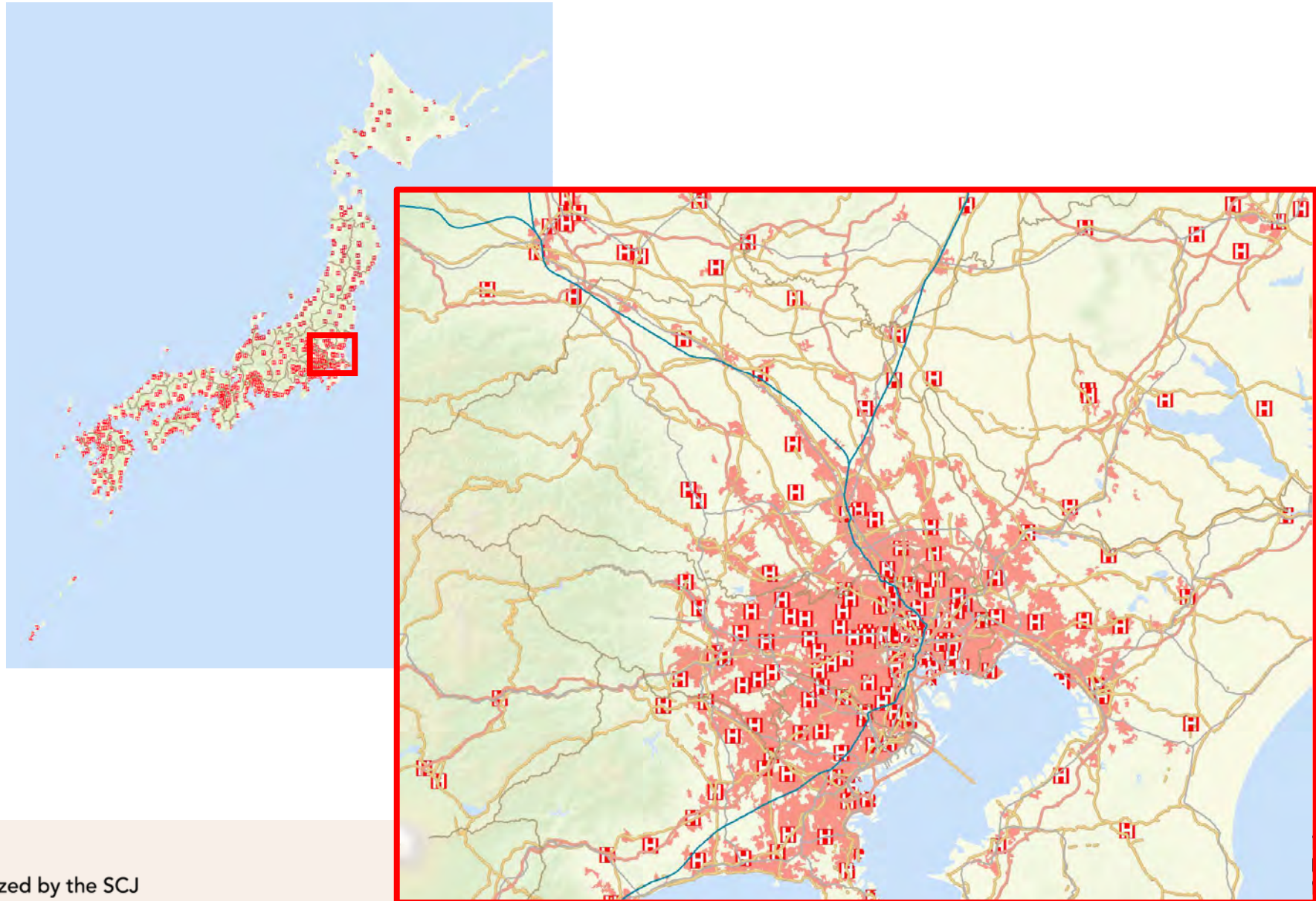
Disaster Base Hospital

- 783 DBHs in Japan
 - 1 National Disaster Medical Center
 - 63 Central DBHs in Prefectures
 - 271 Emergency Center
 - 54 Radiological DBH

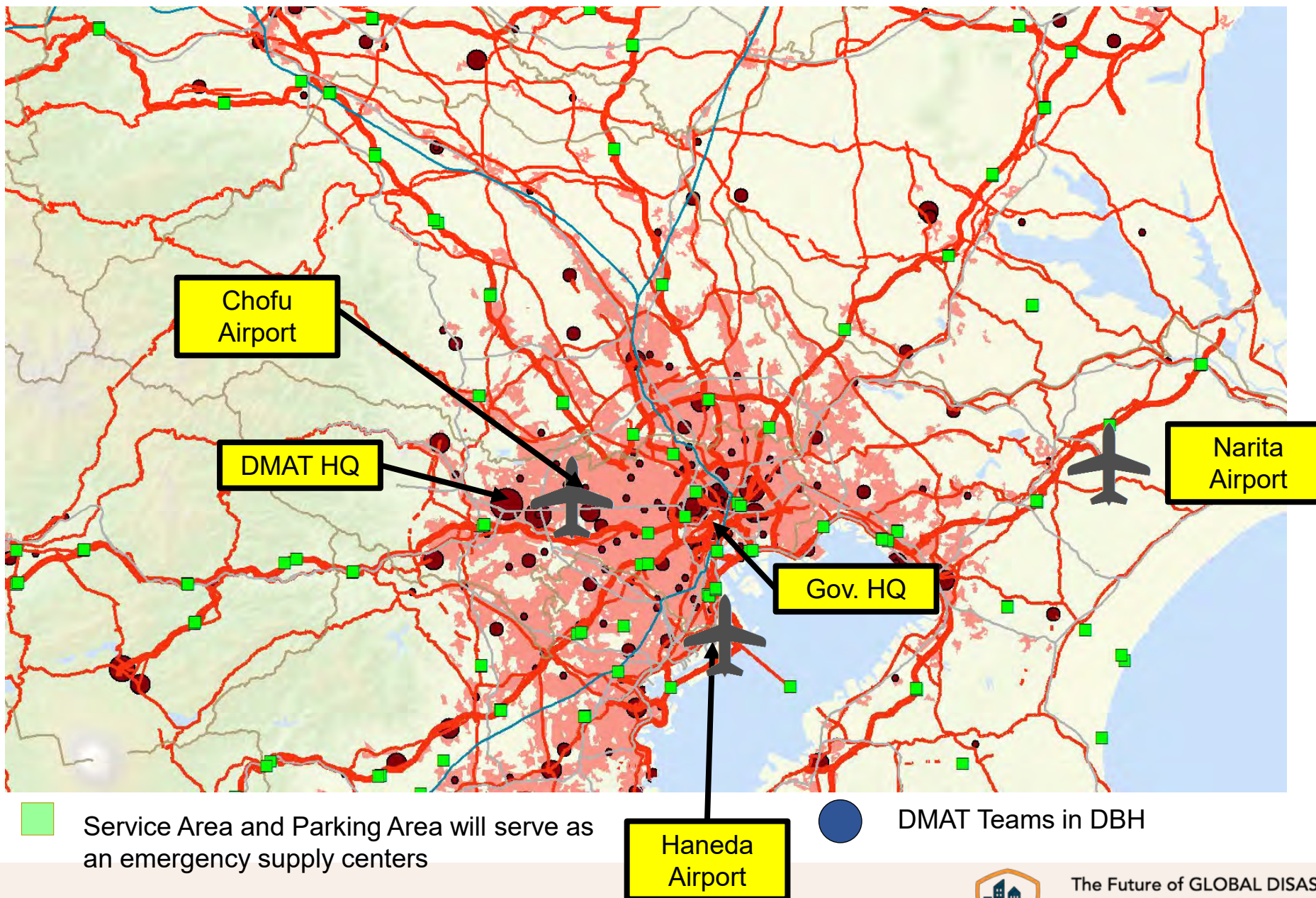
DBH serves as the tertiary hospital in the area regardless of public or private ownership.
National Health Insurance system make this possible.



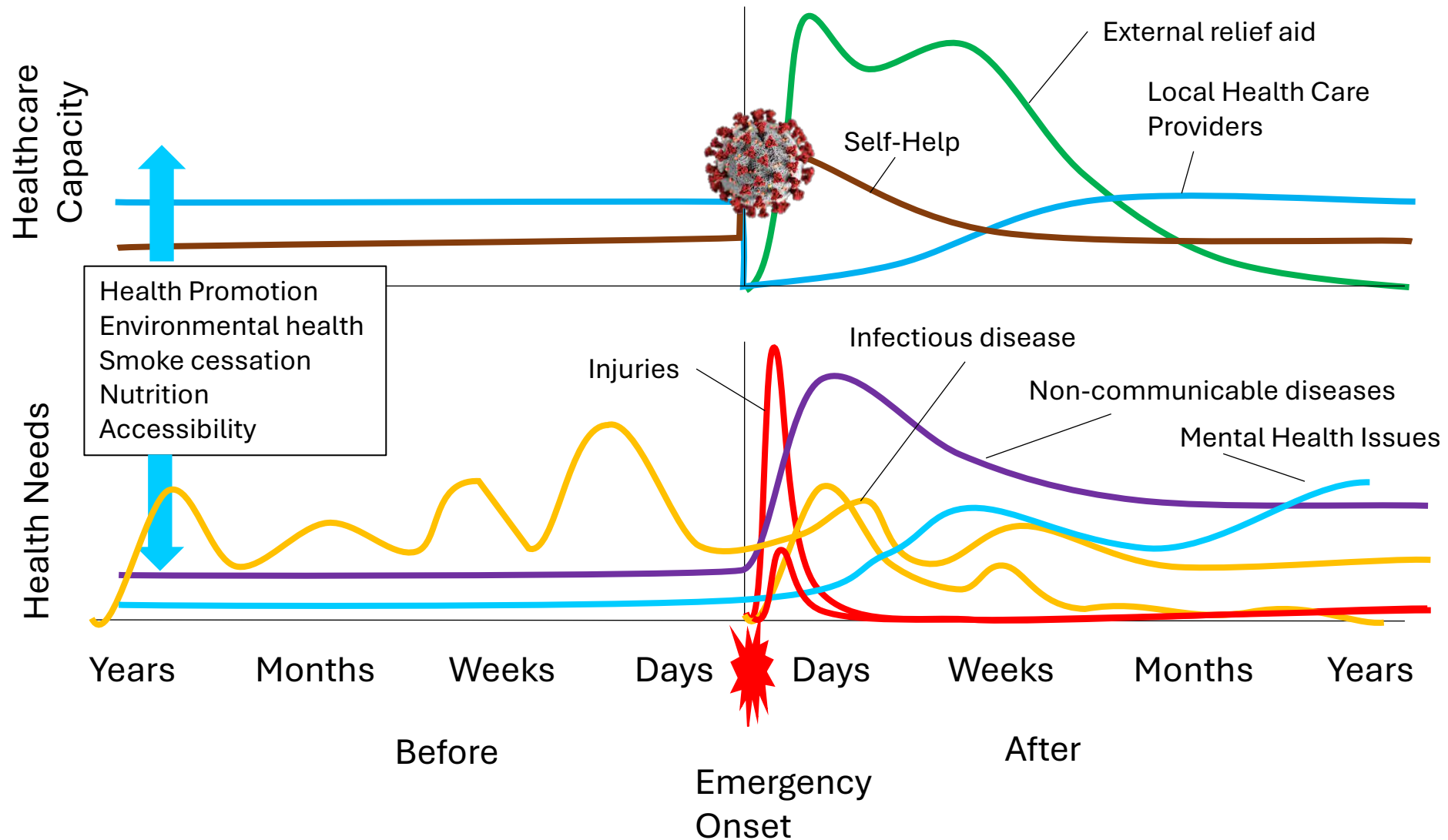
Disaster Base Hospitals in Japan



Preplanned utilization



Medical and public health needs and capacity



Concept of Disaster Medicine

- Emergency Medicine

Resource > Needs

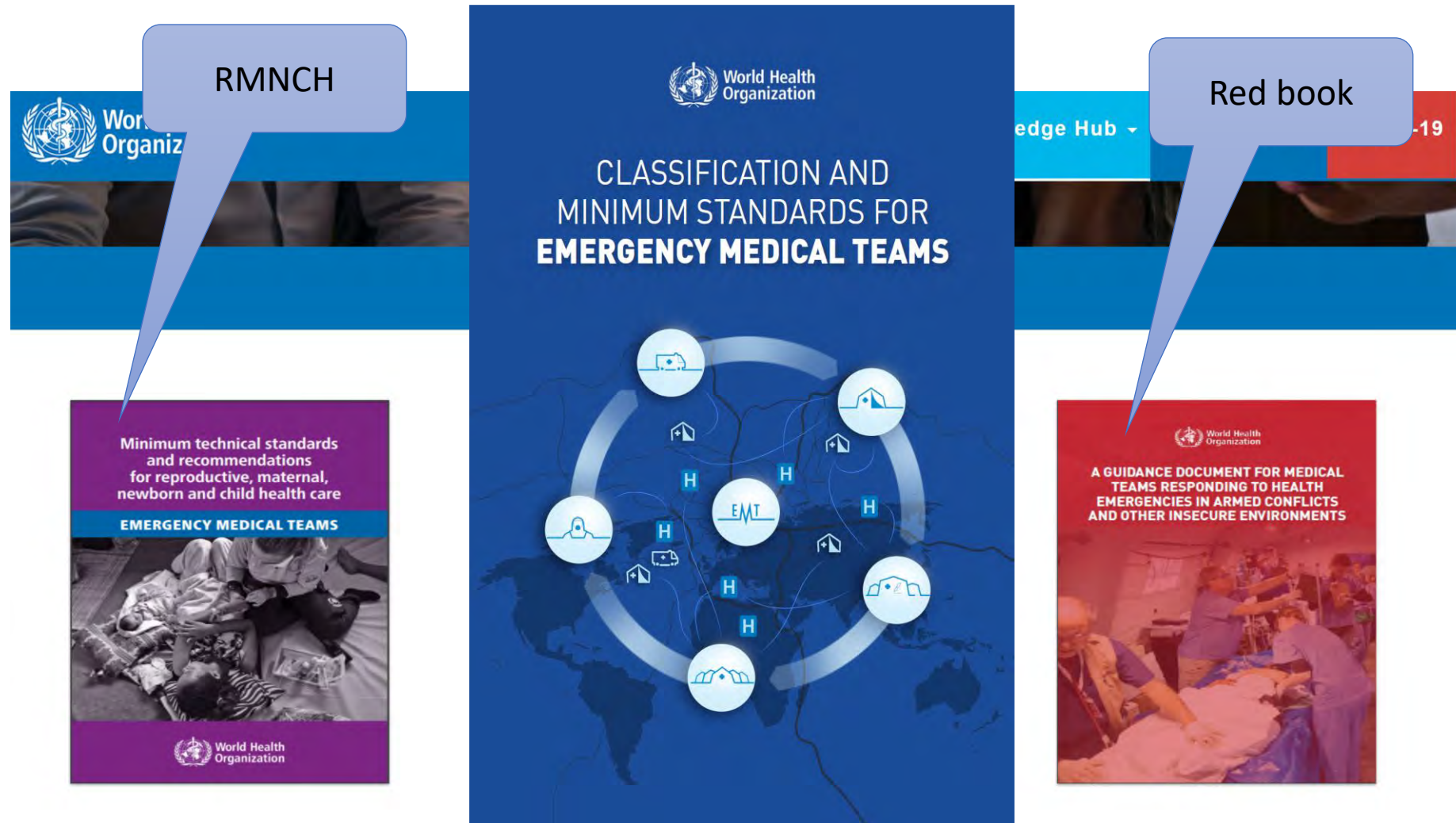
- Disaster Medicine

Resource << **Needs**

- Disaster Medicine in Megacities

Resource <<< **Needs**

We are not alone: Mutual assistance with global health initiatives.



ARCH Project

Project for Strengthening the **A**SEAN **R**egional **C**apacity on Disaster **H**ealth Management

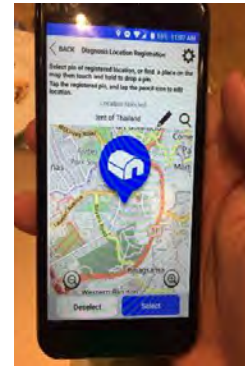


Standardized disaster health management with Japanese experts for regional and individual county EMTs and their coordination.

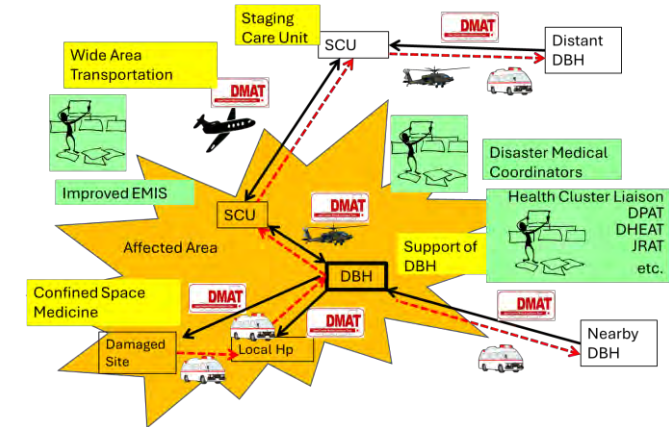


Shared features with the disaster medical systems of Japan. They are ready to help us respecting the language and culture of affected people.

WHO Minimum Data Set (MDS)



EMT Coordination Center (EMTCC)



We have to gain the international support-receiving capacity

Chapter 4 Disaster Public Health in Megacities

Recommendation 3: Minimize the health damage

Prevent rapid environmental deterioration to protect the health of affected people. Proactive preparation and advocacy to induce behavioral change for the people to prepare water, sanitation, and hygiene (WASH), masks, food, and medicine stockpiles, and personal health information so that health HQ in local governments can coordinate medical and public health operations more efficiently.

Recommendation 4: Prevent the indirect disaster-related deaths

Indirect disaster-related deaths are preventable with appropriate policy and preparedness. Proactive individual evacuation plan and disaster case management strategies are strongly recommended, especially for people who need specific assistance.

Recommendation 5: Continue medical, public health, and welfare service provision

During and after a disaster, the healthcare provision is disrupted when needed. To avoid this, the business continuity plan (BCP) is critical and should be continually evaluated for its validity, trained, and improved through business continuity management (BCM). In megacities, proactive implementation of BCP and the development of supporting and support-receiving capacities can maintain the service provision during and after disasters.

Let's increase the resilience of our megacities and ourselves!

