

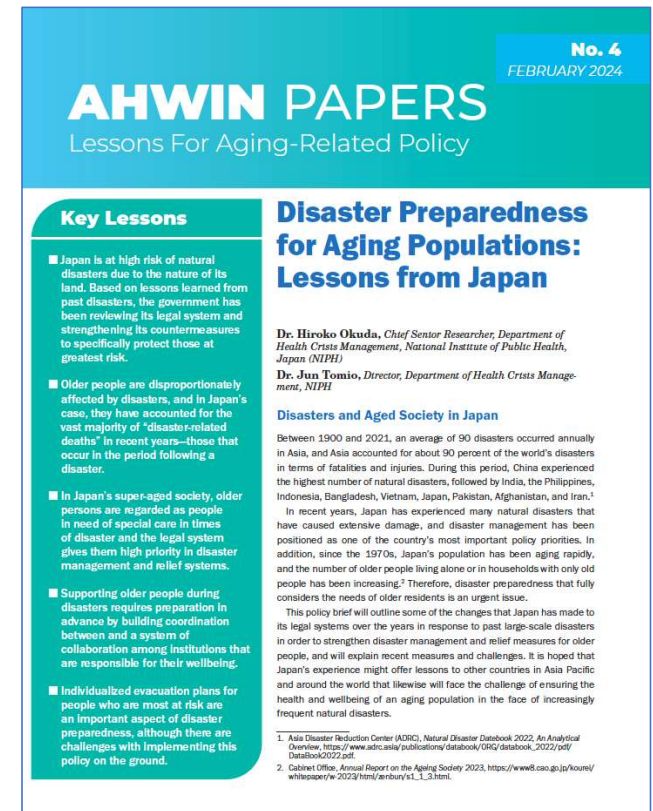
ERIA-JCIE Webinar
Disaster Preparedness and Response for Aging Populations
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Disaster Preparedness for Aging Populations: Lessons from Japan

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- Disasters and aged society in Japan
- Legal system and countermeasures based on lessons learned from disasters
- Health issues for older people resulting from disasters
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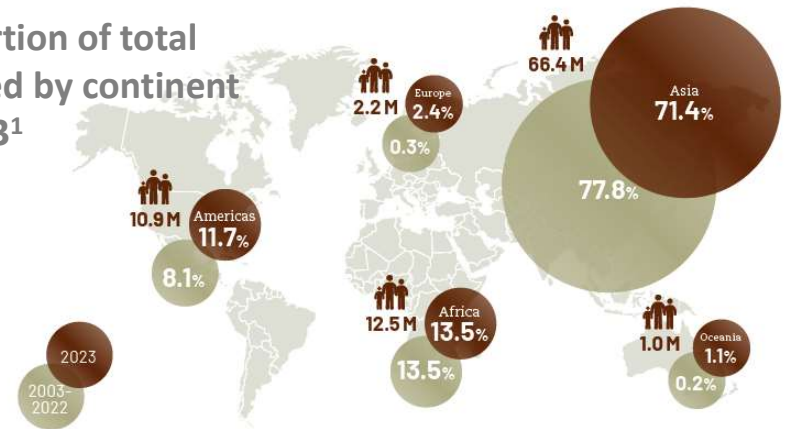
Disasters and aged society in Japan

Disasters in Asia and Japan

- In Asia, avg. 90 disasters occurred annually (1900-2021)
- Japan also has been affected by many natural disasters

➔ Disaster management is one of the Japan's most important policy priorities

Proportion of total affected by continent in 2023¹



Top 10 countries in Asia with high occurrence of disasters in 2022²

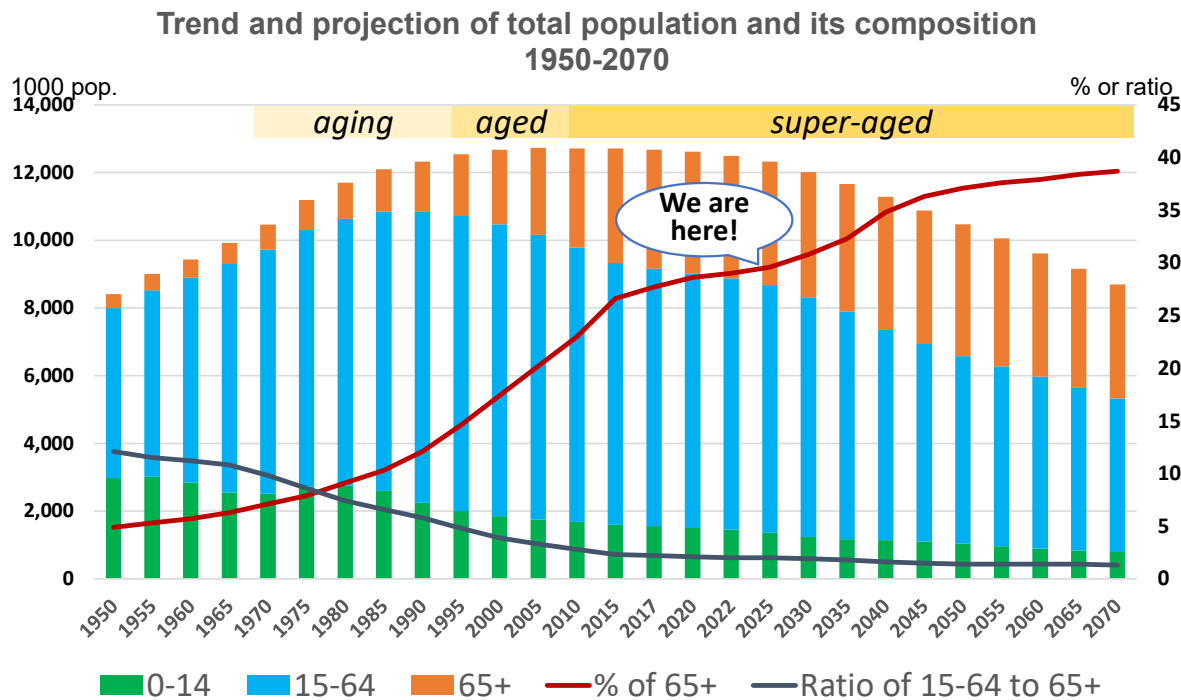


¹ 2023 Disasters in Numbers (Centre for Research on the Epidemiology of Disasters, 2024)

² Natural Disaster Databook 2022 An Analytical Overview (Asian Disaster Reduction Center, 2023)

Aging of Japan

- We are living in a super-aged society**



As of 2022

% of 65+: **29.0%**

Ratio of 15-64 to 65+: **2.0**

% of household with 65+: **49.7%**
(2021)

Disaster preparedness that fully considers the needs of older people is an urgent issue

Legal system based on lessons learned from disasters -1



1946 Nankai earthquake

Deaths: 1,443



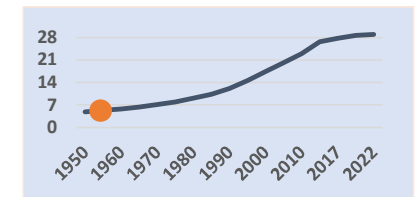
Severe damages in the aftermath of the World War II

1959 Isewan typhoon

Deaths: 5,098



Severe human, property and economic impact



% of 65+: < 7 %



Disaster Relief Act (1947)

- Provision of emergency relief
- Protection of affected people
- Preservation of social order



Basic Act on Disaster Management (1961)

- Protection of the land and the lives and property of the people from disasters
- Disaster Management Plans
 - National and local governments
 - Key public corporations

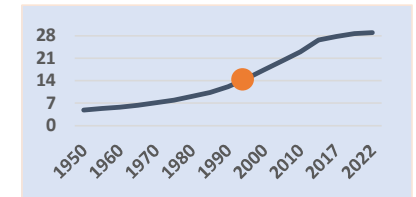
Legal system based on lessons learned from disasters -2

1995 Great Hanshin Awaji Earthquake

Deaths: 6,437

Characteristics and lessons learned

- Devastating human/property damages in the modern metropolitan cities in *aging to aged society*
- 50% of deaths were aged 65+



% of 65+: **14.6** % (1995)

Actions

- Revision of the Basic Act
 - Vulnerable people in times of disaster were defined as “**the elderly, disabled persons, infants, and other people requiring special considerations**”
 - National/local governments were tasked with the implementation of measures for disaster management for those people

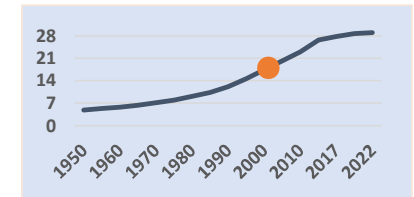
Legal system based on lessons learned from disasters-3

2004 Typhoon No.23 and other heavy rain events

Deaths: 98+

2004 Niigata Chuetsu Earthquake

Deaths: 68



% of 65+: **20.2** % (2005)

Characteristics and lessons learned

- Disasters in ***aged society***
- 60% of the casualties were older people
- **Evacuation delay** resulted in excess deaths among older people



Actions

- Development of the **Guidelines for Evacuation Assistance for Persons in Need of Support during Disasters (2006)**
 - Sharing of information on older residents and other persons in need of special considerations
 - Specific evacuation support plans



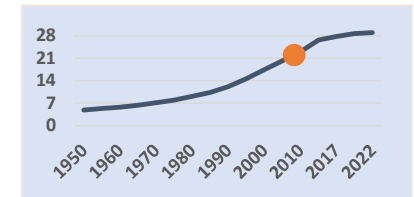
Legal system based on lessons learned from disasters -4

2011 Great East Japan Earthquake

Deaths/missing : 22,318

Characteristics and lessons learned

- The deadliest disaster since WW II in *super-aged* society
- Multi-hazard event
- 65% of the deaths were 60+
- Delayed evacuation from tsunami exacerbated the human damage
- **List of persons requiring assistance and their supporters were not prepared**



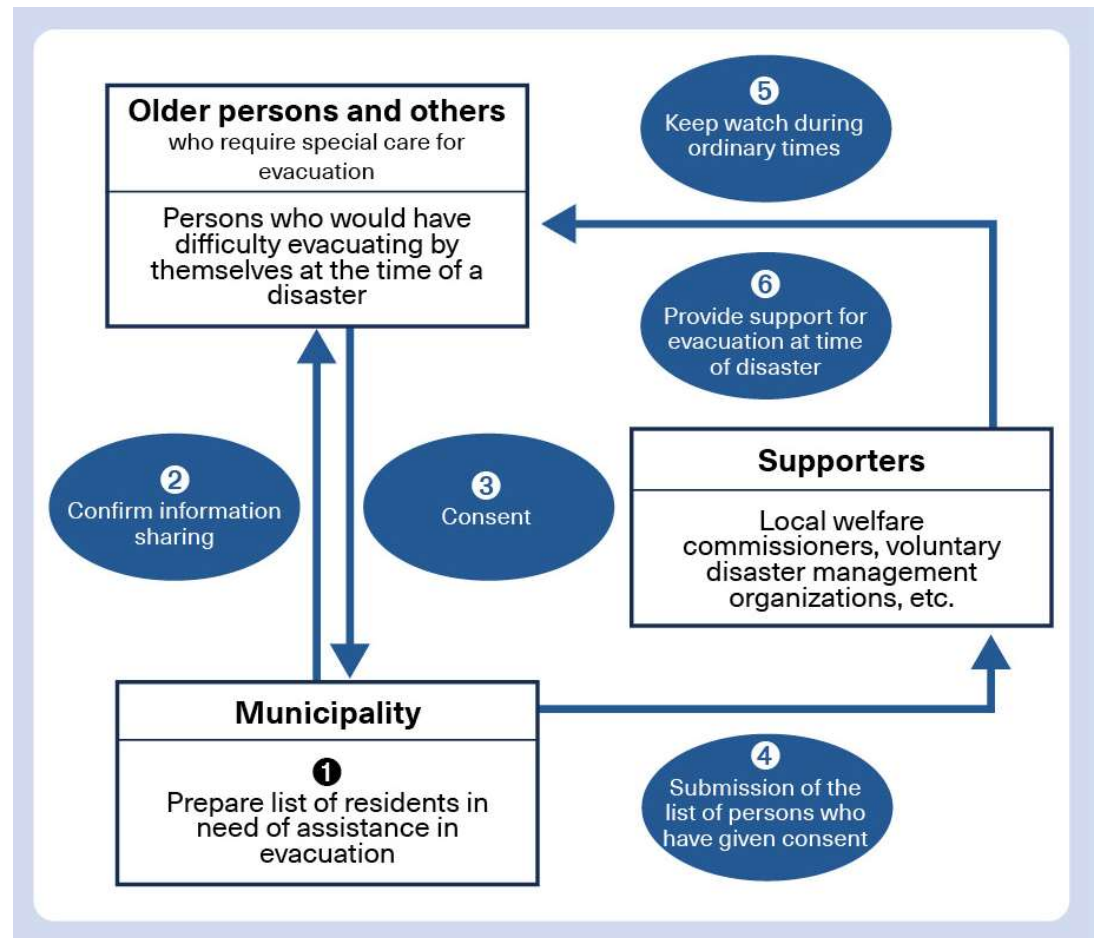
% of 65+: **23.0** % (2010)

Actions


- Revision of the Basic Act (2013)
 - **Mandatory registration** of residents in need of evacuation assistance
- Guidelines for evacuation support were also revised to **Guidelines for Supporting the Evacuation Behavior of Those Who Require Assistance Evacuating**

Development and use of the list of residents in need of assistance with evacuation

(see Figure 2 of the paper)



Legal system based on lessons learned from disasters -5



| | |
|-------------------------------------|------------|
| 2016 Kumamoto Earthquake | Deaths:273 |
| 2018 Heavy Rain Event | Deaths:271 |
| 2019 Typhoon No.19 (Hagibis) | Deaths:108 |
| 2020 Heavy Rain Event | Deaths:88 |

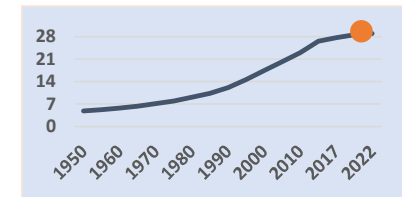
Characteristics and lessons learned

- High frequency of natural disasters in super-aged society
- Higher proportions of deaths among older people
- Disaster-related deaths and secondary health damages



Actions

- Municipalities were required to make efforts to create **individual evacuation plans** for each person on the list who requires support in evacuation



% of 65+: **28.6%** (2020)

Preparedness status as of January 1, 2023

- Lists of persons requiring support for evacuation action
 - **100%** (all 1,741 municipalities)

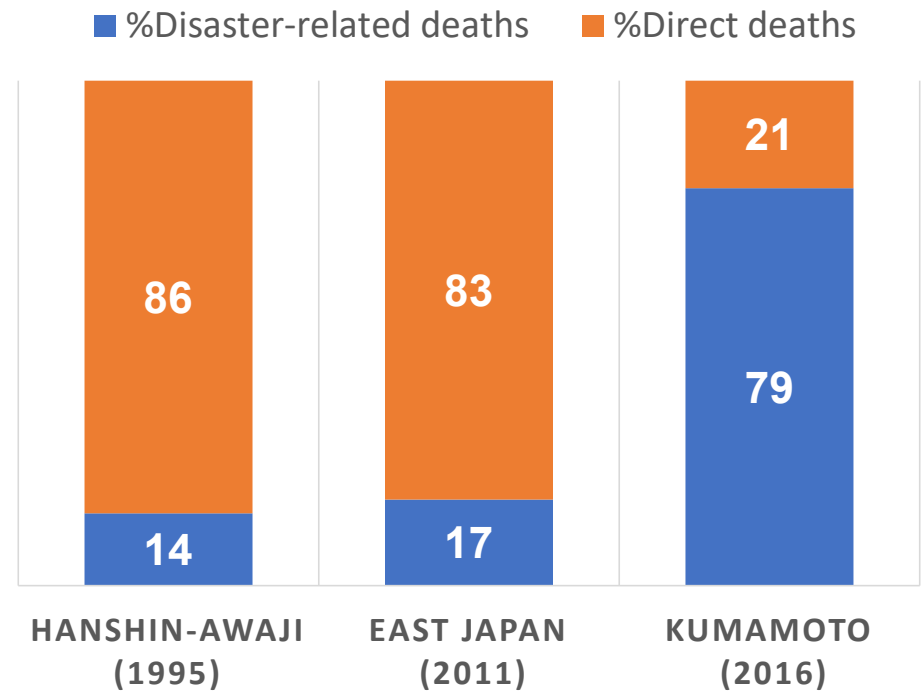
- Individual evacuation plans
 - **9%** (159 municipalities) completed
 - **25%** (438 municipalities) had not prepared

Health issues for older people resulting from disasters

- Older people are at high risk of **disaster-related deaths**

Disaster-related deaths

Deaths as result of deteriorations in their physical conditions due to the evacuation and other related factors after a disaster



Proportions of direct and disaster-related deaths in three large earthquakes

Health issues for older people resulting from disasters

Factors associated with disaster-related deaths

- In the Great East Japan Earthquake...
 - 90% of disaster-related deaths were aged 70+
 - Common reported causes
 - Physical/mental fatigue from living in shelters
 - Physical/mental fatigue during transportation to shelters
 - Aggravation of pre-existing diseases due to shutdown of medical facilities
 - Living environment where the disaster-related deaths were reported
 - Hospital/nursing care facility
 - Same place as before the disaster, such as a home
 - Shelters, etc.

Health issues for older people resulting from disasters

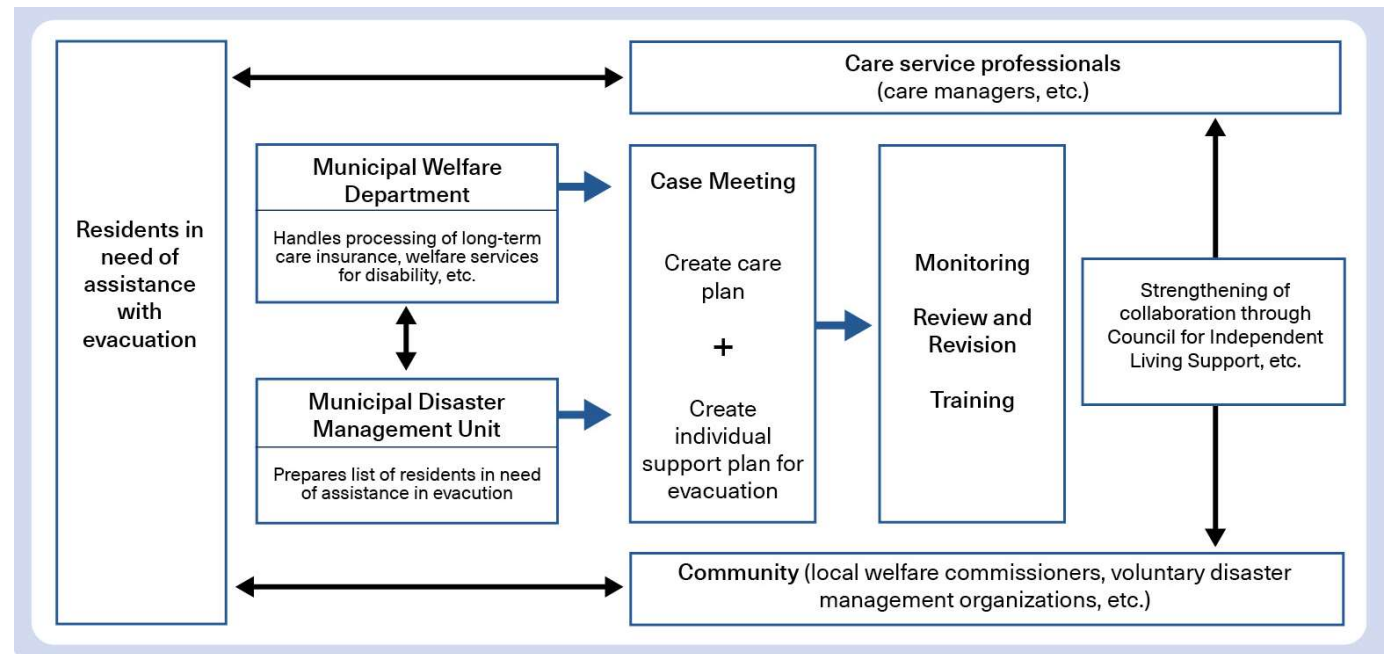
Efforts to ensure satisfactory living conditions at shelters

- **Guidelines for Ensuring Satisfactory Living Conditions at Shelters** called for a strengthening of measures to be taken during normal times
- A support system for older people and others requiring special care must be established to
 1. Secure space in shelters
 2. Procure necessary nursing and medical supplies
 3. Coordinate the confirmation of individuals' safety, provision of supplies, provision of medical and welfare support, etc., for those are sheltering in place at their homes

Efforts to prepare for future disasters

- Collaboration and cooperation among relevant parties (overcoming siloed administration)
- Utilizing an existing framework to support older people (e.g., long-term care services)

An example of creating an individual evacuation plan through collaboration between municipal disaster management and welfare sections
(see Figure 3 of the paper)

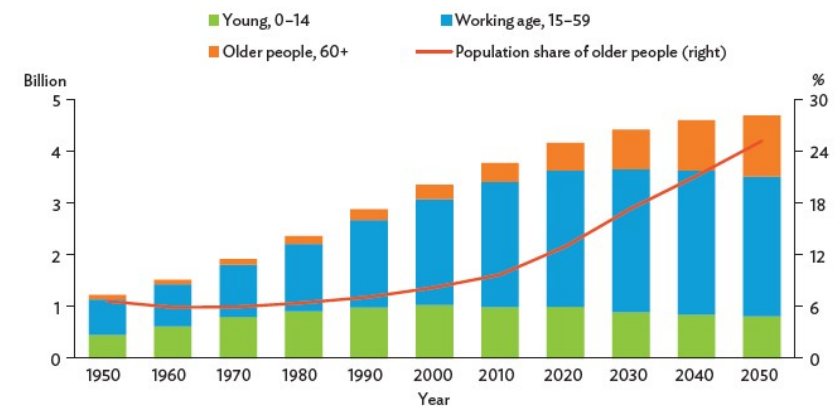


Implications for Asia

- Common context in the Asia-Pacific region
 - Increasing frequency of natural disasters
 - Rapid aging of the population
- Lack of following abilities are potential risk drivers for older people in times of disasters
 - Obtaining disaster information
 - Evacuating quickly by themselves
- Suggestions for better preparedness
 - Development of legal system
 - Identification of older people in the community
 - Planning for evacuation and support from normal times

% of 60+

13.5% (2022) ↗ **25.2%** (2050)



Populations shares by age group, Developing Asia¹

¹Aging well in Asia: Asian Development Policy Report (Asian Development Bank 2024)

Lessons from Noto...

- 2024 Noto Peninsula Earthquake
 - M 7.6 Earthquake and Tsunamis on New Year's Day
 - Deaths: 260+
 - 70%+ were older people
 - Disaster-related deaths: 30+
 - % of 65+ in the affected area: 50%+
 - Severe weather conditions
 - Wide-area/long-term evacuations
 - Individual evacuation plans were not fully prepared...



Wajima City, March 2024

Recovery efforts are still ongoing...