Japan CSO Coalition for Disaster Risk Reduction
JCC-DRR

Recommendations for Effective Dissemination of Early Warning Systems

At COP27 in 2022, UN Secretary-General called for the worldwide dissemination of "early warning systems (EWS)" for disasters. In June of this year, moreover, the Japanese government established a public-private partnership council for the dissemination of EWS in the Asia-Pacific region, and held its first meeting.

Japan is already one of the top countries where the EWS is widely used, leading to early evacuation of many people. However, there are still those who "do not" or "cannot" evacuate, which leads to claim victims in every disaster.

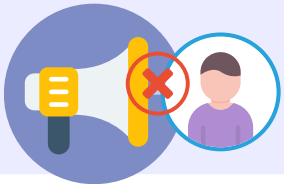
The Japan CSO Coalition for Disaster Risk Reduction (JCC-DRR) conducted research, focusing on the issue, and has compiled a list of recommendations for more effective global dissemination of the EWS.

Issues around the Early Warning System in Japan

The Early Warning System would not exert sufficient effect if it exists in isolation. The Early Warning Initiative for All, spearheaded by the World Meteorological Organization (WMO) and others, requires simultaneous development and implementation of the four pillars.

1. **Disaster risk knowledge**
2. **Detection, observation, monitoring, analysis, and forecasting**
3. **Warning dissemination and communication**
4. **Preparedness and response capabilities**

In Japan, along with various initiatives already been implemented, there are still challenges as well.

Initiatives	Challenges
Identification of disaster risks, and creation and dissemination of hazard maps based on this information	The maps are not fully understood or utilized at the local level. 
Installation and dissemination of water level gauges and other observation equipment, enhancement of DRR radio, area mail, and various information sites	The elderly, people with various disabilities, shut-ins, and foreign nationals do not receive adequate evacuation information. 

In a super-aged society, a list of people in need of assistance and a plan to support such people is being developed.	Elderly care facilities/group homes also exist in areas with disaster risks. Some of the residents are not on the roster of their neighborhood associations, which makes it difficult to assign care workers, especially at night, and there is insufficient cooperation with the local community.
Based on the Disaster Countermeasures Basic Act, "disaster management" is designated as a municipal task.	Due in part to frequent personnel changes, there is often insufficient cooperation with the gender equality and social welfare departments. In addition, the percentage of women in disaster management councils, which oversee such policies, remains low. The percentage of women in local disaster management councils is around 16% in 2021.
Development of voluntary disaster management organizations such as fire brigades	In some cases, the aging and decreasing population of the community makes it difficult for such organizations to sustain.
Conducting evacuation drills at various units such as schools, workplaces, and communities	People with disabilities and foreign nationals tend to be left behind in the evacuation drills.
Progress in improving the environment of evacuation shelters and increasing the number of welfare shelters	Many are hesitant to evacuate to shelters because of concerns about toilets, sleeping conditions, food rationing, and inactivity (disuse syndrome). The number of welfare shelters also needs to be increased for pregnant and nursing mothers.

Lessons learned and recommendations for countries that are introducing or improving EWS

1. EWS is not a panacea

EWS functions more effectively when linked to other disaster prevention and mitigation measures, and therefore needs to be comprehensively developed. Specifically, it is important to develop emergency evacuation shelters and related facilities, safe evacuation routes, means of evacuation (cars, trucks, microbuses, etc.), and local cooperation systems.

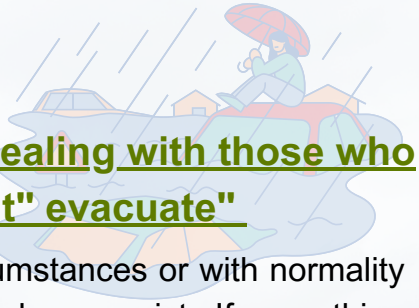
2. Full consideration should be given to the diversity of the information recipients

Multiple methods need to be established so that diverse recipients can easily access warning information. Since developing countries are often multilingual societies and have certain percentage of people with disabilities, the means of information dissemination must be adapted accordingly.

3. EWS does not always work as expected

Various situations can arise, such as disaster sirens not being heard sufficiently due to heavy rain or strong winds, sirens and other devices not functioning adequately due to electricity failure, and the government offices that operate them being confused and unable to utilize them.

It is better to simultaneously transmit various types of information through community-based networks, TV, radio, social media, as well as DRR radio and area mails.



4. Prepare for dealing with those who "don't" or "can't" evacuate"

Due to various circumstances or with normality bias, such people always exist. If something happens to them, it is difficult, or not right, to simply conclude as "self-responsibility". There are also many "people who want to evacuate but can't" for various reasons. It is necessary to establish rules that are appropriate with local culture and values of the residents, before disaster strikes.

5. Development and dissemination of EWS should be done through collaboration with local communities, not top-down

Without community involvement at the development stage, residents will not have a sense of ownership to the EWS, and diverse needs in the community cannot be considered. Hence, the outreach and effectiveness of the warning will be limited.

Residents have unique needs based on a combination of various sociodemographic attributes, including gender, age, disability status, class, ethnicity, economic status, and citizenship status. It is important to build EWS while involving diverse populations in the discussion.