



World Tsunami Awareness Day Webinar - UNESCO-IOC Intergovernmental Coordination Group for Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS) Webinar, 7 November 2023

Inclusive and Accessible Early Warning Systems: Lesson Learned of "Early Warning for Disabilities"

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Outline Presentation

1. Global Profiles of Disabilities
2. Inclusive and accessibility of TEWS
3. Lesson Learned of "Early Warning for Disabilities"
4. Challenges of TEWS for Disabilities



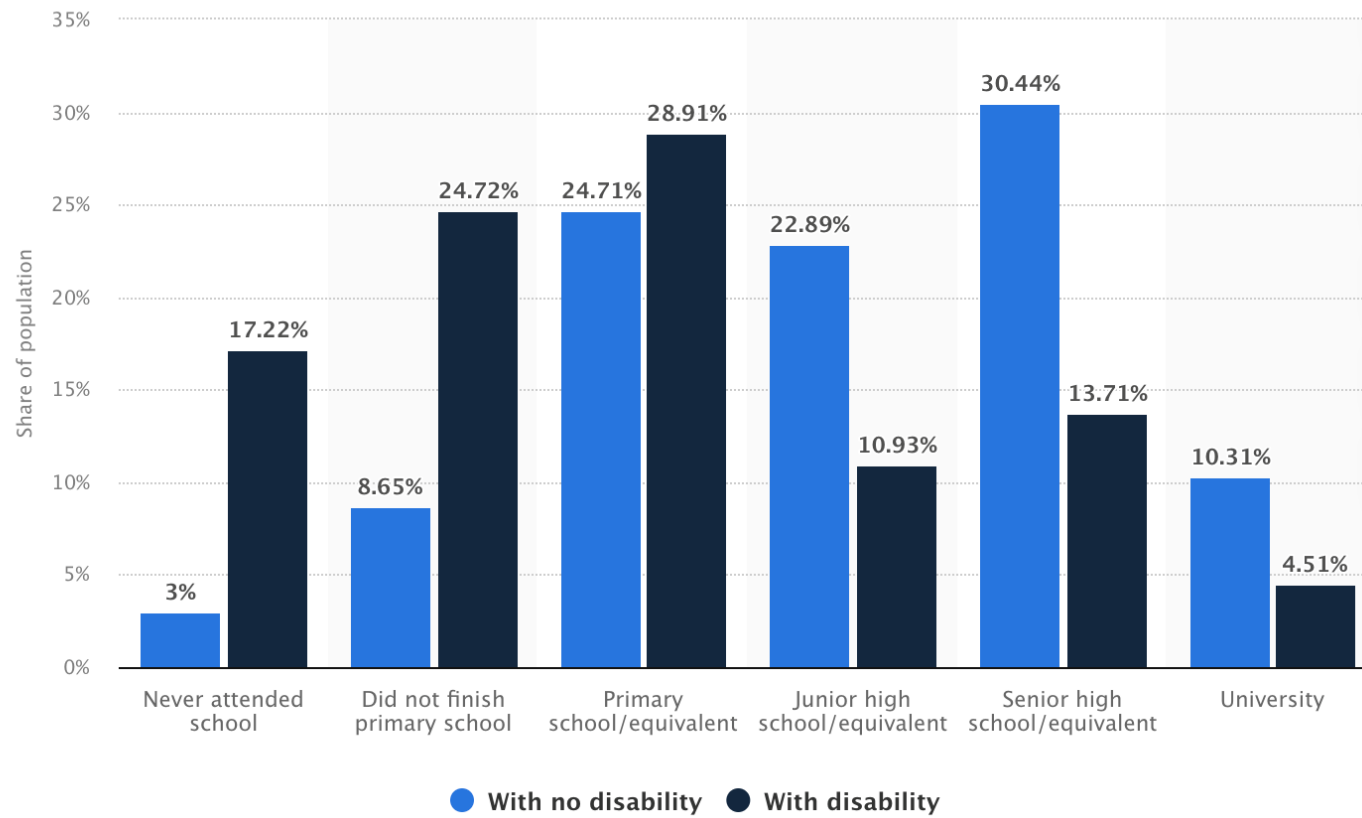
1. Global Profiles of Disabilities

Global Profile of Disabilities

- Estimated 1.3 billion people (16%) of the global population – experience a significant disability today (WHO Mar 7, 2023)
- In Indonesia: about 22.5 million (8.5%) of people with disabilities
- Barriers to full social and economic inclusion of persons with disabilities include inaccessible physical environments and transportation, **the unavailability of assistive devices and technologies, non-adapted means of communication**, gaps in service delivery, and discriminatory prejudice and stigma in society.
- This means limited access to Tsunami Warning Information → Time is very critical for people at the tsunami prone area



Indonesian population over 15 years old in 2022, by highest education level and disability status



[Additional Information](#)

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2. Inclusive and accessibility of TEWS - A Global Initiatives

SDGs & Disabilities



- **Goal 4** on inclusive and equitable quality education and promotion of life-long learning opportunities
- In **Goal 8**: to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all, ... including for persons with disabilities, and equal pay for work of equal value.
- **Goal 10**, which strives to reduce inequality within and among countries by empowering and promoting the social, economic and political inclusion of all, including persons with disabilities.
- **Goal 11** to make cities and human settlements inclusive, safe and sustainable. ...l access to safe, inclusive and accessible, green and public spaces, particularly for persons with disabilities.
- **Goal 17** the global partnership for sustainable development, support to developing countries, including least developed countries (LDCs) and small island developing states (SIDS), also disability.

*2030 Agenda for Sustainable Development and its 17 SDGs pledge **to leave no one behind and recognize disability** as an issue that cuts across all SDGs.*

Sendai Framework
for Disaster Risk Reduction
2015 - 2030



Seven Global Target of SFDRR

Substantially Reduce by 2030:

- a. Global disaster mortality → 100,000 global mortality rate.
- b. Number of affected people globally → 100,000 people.
- c. Direct disaster economic loss in relation to global Gross Domestic Product (GDP)
- d. Disaster damage to *critical infrastructure* and disruption of *basic services*, among them health and educational facilities, including through developing their resilience

Substantially Increase by 2030:

- e. Number of countries with national and local DRR (disaster risk reduction) strategies.
- f. International cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this Framework.
- g. Access to multi-hazard early warning systems (MHEWS) and disaster risk information and assessments to people by 2030

Third UN
on Disas



1 To achieve the 2030 Agenda, DRR must be integrated at the core of development and finance policies, legislation and plans.

2 Conduct systemic changes to account for the real cost of disasters, cost of inaction and weigh it against investments in DRR.

3 Governments to honor the commitments made in COP 26 to drastically enhance financing for and support to climate adaptation and resilience.

4 Calls for a participatory and human rights-based approach to include all under a principle of “nothing about us without us” in DRR planning and implementation.

5 Ensure every person on Earth is protected by early warning systems within five years.

6 Potentially transformative lessons learned from the COVID-19 pandemic must be applied before the window of opportunity closes.

7 Comprehensive and systematic reporting, including a robust review of progress made against all SF targets.

The 7 GPDRR Recommendations of BAR (Bali Agenda for Resilience)

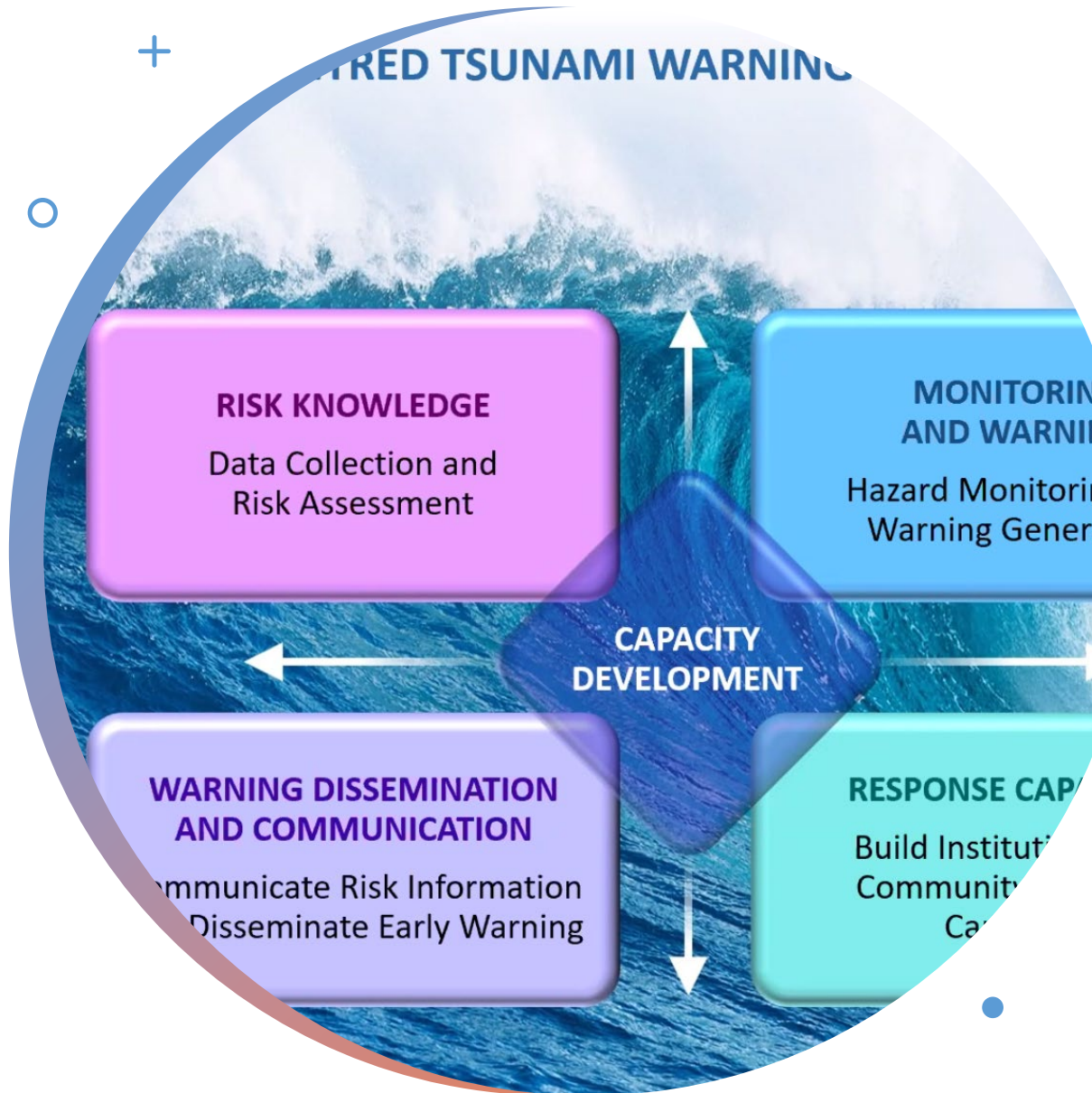
SUSTAINABLE RESILIENCE

Concepts

- Definitions
- Target/Goal
- Indicators
- Actors
- Timeline

Action/Program

- Program for New Policy
- Program for Current Policy
- Platform for Activities



UNESCO IOC & UNDRR: Early Warning for ALL

- The UN Secretary-General has called for every person on Earth to be protected by early warning systems within five years by 2027.
- Early Warnings for All is a groundbreaking initiative to ensure that everyone on Earth is protected from hazardous weather, water, or climate events through life-saving early warning systems by the end of 2027.
- Strengthened people-centred inclusive approaches to multi-hazards



3. Lesson Learned of "Early Warning for Disabilities"



Lesson Learned
from PEER 6 in
Developing SOP
for Disabilities
and tested in
IOWave 2016 in
Padang -
Indonesia
Reaching the
Very Last Miles

Lesson Learned from IABI

- **The Unspoken Ministry (TUM) Indonesia**, a non-profit organization dedicated to Deaf community services by providing some affirmative actions.
- Through in-depth research on the effectiveness of Sound Based Early Warning System (SBEWS) for the deaf, tested on 180 deaf from 10 cities (34 province) in Indonesia supported by 223 volunteers.
- Visual Based Early Warning System (VisEWS): using blinker (warning/emergency light)
- Vibration Based Early Warning System (VibEWS): using smart bangles, smart watches or smart ring.



Unspoken
Ministry

early
warning
for All



Lesson Learned from Indian Ocean

- Oman using flare to show the evacuation shelter.
- Padang Indonesia using spotlight for showing the safe place (hill) or evacuation shelter





4. Challenges of TEWS for Disabilities

Challenges

- Need more multi disciplinary socio-technology invention to support the EWS4ALL for Disability, with characterized **marketable** and **integrate-able**.
- Engagement with Pentahelix: Government, Community, Academia, Business, and Media
- SOP for inclusive and accessible Tsunami Early Warning System.
- Tsunami Exercise for All

KARAKTERISTIK PRODUK INOVASI

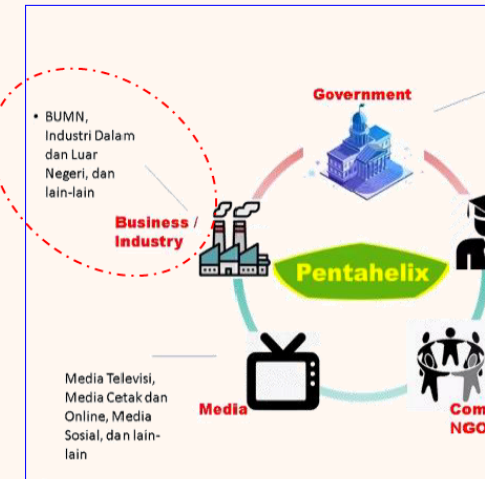
• Bukan *stand-alone product*
• Inovasi # lebih cepat, lebih mudah dan lebih murah, dan lebih handal

• Produk inovasi teknologi yang kebencanaan dalam kategori subset **CMTP** dan



PENTAHELIX EKOSISTEM INOVASI

Diseminasi:
• Produksi berkelanjutan; “Marketable”
• Integrate-able.



Terimakasih

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