IWRM Action Hub

CASE STUDY

Indonesia: Raising Awareness about Inclusive Early Warning in Papua

Summary

Indonesia is home to an extremely varied topography and climate which is why society needs to move from a risky population to a resilient community. In order to do that, exclusive approaches needed to be improved.

AWAKE Project is a solution to work inclusively. This project focuses on children by holding education and training in disaster mitigation with more engaging activities based on several learning styles through comics, songs, storytelling, and role-plays, and people with disabilities by equipping them with basic knowledge of preparedness by providing a handbook in Braille and informative videos using sign language. This project was implemented through a multi-governance partnership.

Background

Based on the World Risk Index 2021, Indonesia is categorized as a country with a high level of disasters due to the high level of its exposure and vulnerability such as varying rainfall, rising sea levels, and rising temperature that can lead to tidal waves, floods, landslides, forest fires, and droughts.

In 2021, there were 5,402 disasters that happened in Indonesia and 98% of them were related to the hydrometeorological hazard. More than 7 million people were impacted, 150,000 people lost their homes and 728 souls died. For the last decade, The National Agency for Disaster Countermeasure of Indonesia (BNPB) recorded that the natural hazards in Indonesia have increased more than five times. Consequently, 10,653 people died and more than 40 million lost their homes. That is why living in “harmony” with disaster is a must. Society needs to understand the importance of Disaster Risk

Reduction (DRR) planning in order to move from a risky population to a resilient community.

Reducing the impact of disasters can be done by increasing community capacity, reducing exposure, and increasing resilience through mitigation, preparedness, emergency response, recovery, and real action on climate change adaptation afterward. This action must be genuinely inclusive, requires a strong and specific context, and be included in regional planning. Moreover, the high level of ignorance on hydrometeorological disasters in Indonesia proves that education and awareness about disaster preparedness are still lacking.

It is true that training and mitigation education are held frequently, yet these current mechanisms do not include children and people with disabilities, who are often put among the vulnerable groups.

As meteorologists, we are very aware of the importance of providing an inclusive movement in disaster mitigation and education. This inclusive movement could be started by conducting training on evacuation routes for persons with disabilities, raising awareness on how to react appropriately to early warnings for children, and educating the society at the local level about local wisdom in order to act for the climate change adaptation.

All of these movements have been started with the AWAKE Project: “Awareness and Knowledge about Early Warning” in Papua, Indonesia since May 2022.

Actions taken

AWAKE Project is an educational system that focuses on working inclusively to improve the preparedness and ability to respond appropriately to warnings. AWAKE Project is designed inclusively for children (7-15 years old) and people with disabilities. This project was initiated by a meteorologist who works for the Indonesian Agency for Meteorology, Climatology, and Geophysic Papua (BBMKG Regional V). It is believed that AWAKE would help equip these special groups of people with the necessary knowledge on local hazards, as well as the proper skills for responding to the early warning spread, learning about the weather and climate, and also the potential disaster that may occur.

AWAKE Project will be held from May to November 2022 in Papua and is expected to be the inception of regional planning for an inclusive early warning system.

There are two things that AWAKE Project focuses on:

- **Child-Centered Preparedness**

We acknowledge the importance of including children as a part of the community as one of the

stakeholders in disaster preparedness. This project offers to provide lifelong-learning skills for the children, which for now we are focusing on ages 7 to 15. More than just having ideas on safety tips for the common disasters around them, children would also be equipped with knowledge about the natural environment they live in: the land, the ocean, the weather, and the climate.

- **People with disabilities Center - Preparedness**

People with disabilities are considered to be one of the most vulnerable groups of people not only due to physical reasons but also to some social and environmental factors. This project offers to provide the basic knowledge about disaster preparedness for this special group of people. By memorizing some basic yet essential information, they would be more confident when disasters come on their way, which then would lead them to give the necessary responses and, eventually survive.

- **Pentahelix Collaboration**

An ideal early warning system is not only about how advanced the system is but also how effective the warning is in helping society. The only way to ensure that is to step back, reach out and look for a local solution. Collaboration is key.

“It takes a village to raise a kid”; therefore, the contribution of the whole ecosystem is needed to scale innovation.

In order to establish a thorough and legitimate preparedness, there is no better approach than implementing the Pentahelix Collaboration, a collaborative approach by sharing roles and having an open dialogue to build mutual respect and perspective across many sectors of the society. This multi-stakeholder partnership consisting of academia, government, private Sector, community, and media representatives, is expected to empower every action to obtain the goal through the following roles:

1. Academia: Researchers who create innovations in producing the Early Warning System (EWS) by collecting and monitoring the data, as well as mapping the disaster-prone areas. As a part of this sector, the Meteorological Agency of Indonesia contributes by advancing the effectiveness of the EWS.
2. Government: Political authorities who systemize and observe the implementation of innovations developed by academia. The local government plays a significant role in legitimating the policies.
3. Private sector: Business parties who produce the materials such as comics and animated videos for children and handbooks in Braille for people with disabilities.
4. Community: Volunteers who support academia and government through training to raise awareness and educate society on preparedness.
5. Media: Platforms of mass communication that publish news and information to the society. As it has such power to lead public opinion, the media should also take a part in educating people by spreading awareness and resilience on the EWS dissemination.

Outcomes

In implementing the Pentahelix Collaboration, AWAKE works along with 24 agencies and NGOs that consist of (1) three academic sectors, (2) three government sectors, (3) two private sectors, (4) six NGOs, and two groups of community support services for people with disabilities, and (5) seven media platforms both printed and electronic. Hereinafter, AWAKE will hold training seminars at 25 regular schools, three schools for children with special needs, and two housings for the blind. Three thousand children and fifty people with disabilities are expected to be reached out by AWAKE, and the general public will be educated through webinars.

The expected output of this project is:

1. Incorporating all the four learning styles: visual, auditory, reading and writing, and kinesthetic, would be effective in engaging the students to learn. This would help them to be aware of the potential disasters around them. Furthermore, this group of little souls would bring meaningful impacts to the community and act as stakeholders in disaster preparedness for the family.

2. Messages can only be understood effectively if they are delivered using the proper

languages. Equipping people with disabilities with basic knowledge of preparedness can be done by making a handbook in Braille and informative videos using sign language. Moreover, inviting this community support service for people with disabilities to be trained while providing insightful feedback along the way to help equip them with basic knowledge on preparedness. This helps them to be well-prepared and more confident when disasters happen.

Implementation:

In the first month of implementation, AWAKE Project started by expanding the network involving 20 meteorologists from all over Papua and working virtually. All of the members are divided into 3 groups, such as;

1. Editorial team: Responsible to compile the learning material and analyzing data
2. Creative team: Responsible for the output of the project such as producing video animations, songs, board games, and digital comics.
3. Equipment team: Responsible for the documentation and report summary in every meeting and handling the correspondence & administration.

On June 7th 2022 AWAKE Team had the first visit to Junior High School 1 Wamena and reached 40 students. Wamena is one of the disaster prone-areas in Papua for floods, landslides, and drought. This first visitation was fully supported by the teachers, school staff, and Head of the Center for Meteorology, Climatology and Geophysics Papua.

In the third week of June, AWAKE is planning to hold a roundtable webinar with stakeholders from Academia, Government, Private Sector, Community, and Mass Media. It is an organized discussion with one moderator, several chosen speakers that bring a variety of perspectives to a subject, and an audience who may simply observe or participate by asking questions. Roundtable discussions are also great for having conversations from other viewpoints on the same topic. Participants and speakers alike take away new perspectives and information from every discussion.

This roundtable meeting will promote the “Early Warning, Early Action” goal for society, raising awareness of the potential disasters in Papua, as well as educating stakeholders and communities on disaster preparedness, introducing disaster preparedness and mitigation concepts from the policymaker's perspective to reach ideal dissemination for all and introducing the importance of an inclusive preparedness and mitigation education through AWAKE Project.

Lessons Learned

Inclusive disaster preparedness is quite new in Indonesia. There are no specific guidelines issued by the government. That's why the AWAKE Project can be the first step toward an inclusive movement.

Disaster preparedness is an important life skill that young people must learn. By involving children, schools, and academics, we hope that disaster mitigation education will be included in daily learning activities.

To achieve the ideal disaster risk reduction, contributions and collaborations across these five sectors in society are needed. This project can break the gap and reach a mutual agreement to build a resilient community.

AWAKE would also approach climate adaptation and mitigation through indigenous knowledge systems. It is not only oriented towards ethics but also norms, actions, and behavior. Thus, local

wisdom can be a guide in behaving and acting, both in daily life and in determining further civilization.

At the end of the project, Awake will publish a study showing the most effective ways to teach children about disaster preparedness that may be useful for other countries in implementing the IWRM approach.

Contributing Authors
Baru Netty

Corresponding Author
Olua Graziela

Corresponding Author Contact
grazielariani@gmail.com

Organisation
Meteorology, Climatology, and Geophysical Agency of Indonesia - BMKG

Year
2022

Country
Indonesia

Region
Asia

Keywords
Early Warning Systems

Thematic Tagging
Gender , Youth , Gender , Youth , Climate
Language English

Related IWRM Tools
Multi-Stakeholder Partnerships, Youth Engagement and Empowerment , Behaviour Change Communication

---

Source URL: https://iwrmactionhub.org/case-study/indonesia-raising-awareness-about-inclusive-early-warning-papua