

PARTICIPATORY COMMUNITY RISK ASSESSMENT FOR CLIMATE-RESILIENT WASH IN INDONESIA



The ECT WASH (Environmentally Sound, Climate Resilient and Transformation of Humanitarian WASH) program is a global initiative aimed at strengthening climate-sensitive water, sanitation, and hygiene (WASH) services in fragile and disaster-prone regions. This program is implemented from 2023 to 2026 in across thirteen countries by the consortium of Arbeiter-Samariter-Bund, arche noVa and German Toilet Organisation, together with local partners in the countries. This program integrates climate risk

assessments, nature-based solutions, and participatory approaches to enhance community resilience. By incorporating environmental sustainability and disaster preparedness into WASH interventions, the program ensures that vulnerable communities can access safe water and sanitation while adapting to climate change. Through collaboration with local partners, governments, and humanitarian actors, the ECT WASH fosters long-term solutions that bridge humanitarian aid and sustainable development.

Project Brief: Strengthening Climate Resilience through Community-Based Risk Assessments

Communities in Indonesia are increasingly vulnerable to hydrometeorological hazards, such as floods, droughts, and landslides, which disrupt water access and sanitation systems. In the Gunung Kidul and Magelang districts, prolonged dry seasons and extreme weather events have made water scarcity a pressing issue, while other areas frequently experience floods and landslides.

The ECT WASH project, implemented by ASB South and Southeast Asia, integrates participatory community risk assessments to ensure that disaster preparedness and climate adaptation strategies are locally driven and inclusive. By involving community members, particularly at-risk groups such as persons with disabilities and the elderly, the project fosters a bottom-up approach where local knowledge and scientific data are combined to identify vulnerabilities and prioritize WASH and DRR interventions.

Through structured risk mapping exercises, community discussions, and scenario planning, participants analyze climate trends and their impact on water resources. This process strengthens early warning systems and enhances the community's capacity to take anticipatory action, ensuring that local WASH services remain accessible and resilient. By equipping communities with the skills to assess and mitigate risks, the project not only builds immediate preparedness but also fosters long-term ownership and sustainability of climate-resilient WASH solutions.

The ECT WASH project in Indonesia: a snapshot up to 2024



4 villages are intervened in 2 provinces



targeting **22.705** people in the areas



village has developed DRR plan that integrate climate mitigation and adaptation action



The Climate and Environment Charter has been signed by ASB South and Southeast Asia



villages has conducted community - based climate risk assessment through the use of NEAT+



WASH trainings involving living in IDP Camps and DRR trainings involving local authorities were conducted

What can we learn from Indonesia?

The Disaster Risk Assessment document, legalized in 2024, provides a framework for village-level risk assessments in Magelang district. A key approach was conducting inclusive DRR assessments at the household level, integrating climate risk considerations. The process involved collaboration between Organisation with People with Disabilities (OPDis), the DRR Forum, village government, and community health cadres (volunteers), ensuring diverse participation and representation. These assessments generated critical data on high-risk groups, household preparedness, and climate-related vulnerabilities, such as flash floods and landslides due to increased rainfall.

To specifically identify high-risk groups, the project utilized the snowball method, an effective technique that begins by identifying a few key informants who then refer to other individuals within their networks. This approach is particularly useful for reaching marginalized or vulnerable populations who may not be easily identified through conventional methods.

This participatory approach enhanced local stakeholders' understanding of inclusive DRR and climate risk management. Improved coordination between OPDis, village, and district governments led to better climate-related disaster preparedness and the mainstreaming of climate-sensitive, inclusive DRR into village development planning. Additionally, awareness of climate change impacts on vulnerable groups, including persons with disabilities, increased, leading to more targeted interventions, such as improved early warning systems tailored to their needs. As a result, the project successfully integrated local knowledge and perspectives in the assessment document, resulting in more effective and sustainable WASH and DRR implementation.

One major challenge found during the mapping processes was the limited capacity of data collection teams to integrate climate risk data into inclusive

DRR assessments. Additionally, there was a lack of disaggregated data on how climate change specifically impacts vulnerable groups (including people with disabilities, elderly, and women and children) in the Magelang district. Translating climate projections into actionable local DRR plans proved difficult due to limited local expertise in climate modeling and risk downscaling.

To address these challenges, the ECT WASH project focused on capacity building for stakeholders on climate-sensitive, inclusive DRR, including data collection and analysis. Increased participation of groups at a high risk in climate risk assessment and DRR planning strengthened local ownership. Climate risk considerations were integrated into government development plans at all levels, ensuring sustainability. Collaboration with climate experts helped develop localized climate risk assessments and adaptation strategies. One key outcome was the establishment of community-based early warning systems for landslides, incorporating local knowledge and tailored communication strategies for vulnerable groups in Magelang.

Through these best practices, the project has demonstrated how participatory community risk assessments can enhance local climate resilience and improve WASH service sustainability in disaster-prone regions.

