

Gender Equality, Disability and Social Inclusion Case Study

# BUILDING THE ENABLING ENVIRONMENT FOR INCLUSIVE, CLIMATE RESILIENT WASH AND WATER RESOURCE MANAGEMENT IN PAPUA NEW GUINEA



Partners  
WaterAid, Government of Papua New Guinea



THE  
AUSTRALIAN  
WATER  
PARTNERSHIP

**About the Authors**

Prepared by Isobel Davis, Shreya Gyawali, and Chelsea Huggett, Fraser Goff, Jonathan Kunau and Glenda Yakuna from WaterAid for the Australian Water Partnership.

**Acknowledgements**

This report and related program work is supported by the Australian Water Partnership (AWP), an international cooperation initiative supporting developing countries in the Indo-Pacific region and beyond work towards the sustainable management of their water resources. The authors would like to thank other AWP and WaterAid colleagues who have contributed to this final document. The AWP is funded by the Australian Government through the Australian Department of Foreign Affairs and Trade and managed by eWater Limited.

**Disclaimer**

This report has been funded by the Australian Government through the Department of Foreign Affairs and Trade. The views expressed in this publication are the author's alone and are not necessarily the views of the Australian Government.

**Citation**

Davis, I., Gyawali, S., Huggett, C., Goff, F., Kunau, J., & Yakuna, G. (2024) Gender Equality, Disability and Social Inclusion (GEDSI) Case Study: Building the Enabling Environment for Inclusive, Climate Resilient WASH and Water Resource Management in Papua New Guinea.

**Cover photo:**

Augusta Henson, an officer at East Sepik Disabled Person's Agency who lives with a vision impairment, engaging in the community WASH and WRM sessions. (Source: WaterAid/Freddy Narowen)

978-1-921543-81-4 (Online)

978-1-921543-80-7 (Print)

Copyright © 2024 eWater Ltd (published 27 March 2024)

UC Innovation Centre (Bldg 22)

University Drive South

Canberra ACT 2617 AUSTRALIA

T: +61 2 6206 8320

E: [contact@waterpartnership.org.au](mailto:contact@waterpartnership.org.au)

[waterpartnership.org.au](http://waterpartnership.org.au)



## Overview

The Australian Water Partnership (AWP) has supported the strengthening of climate and water resource management data in the Papua New Guinea (PNG) national water, sanitation and hygiene (WASH) monitoring system. Building on efforts by the Government of PNG, the national WASH coordinating body and WaterAid to develop a national monitoring system and bring stakeholders together for planning and decision-making, this activity aimed to support and scale efforts towards more inclusive, climate resilient WASH services and water resource management (WRM). The activity included adding or enhancing climate, WRM and inequality data in the monitoring system, training and capacity building for government and rights holder organisations and the promotion of meaningful inclusion and participation of marginalised groups in WASH, WRM and climate change efforts.



## Activity Background

In response to the low level of access to essential WASH services, the Government of PNG developed its national WASH Policy 2015-2030. The policy provides a roadmap for progressively increasing access to safely managed WASH. While the policy provides ambitious targets, headway to realise this ambition has been hampered by limited data, coordination and integration between WASH and non-WASH actors. PNG has historically had significant data gaps across many development priorities, including water availability and water quality. Since 2018, WaterAid has been supporting PNG's Department of National Planning and Monitoring WASH Planning and Monitoring Unit (DNPM WASH PMU) to develop a national monitoring system, called the [WASH Management Information System \(MIS\)](#). DNPM is committed to iteratively building robust national data for water policy, planning, budgeting and service delivery.

The Government of PNG and WaterAid identified an opportunity to build the enabling environment for inclusive, climate resilient WASH and WRM in PNG. As part of these efforts, since 2022 AWP has supported partners, led by WaterAid, to scale up the national WASH MIS by integrating climate, inequality and WRM indicators. To compliment this approach, partners also expanded sub national monitoring and empowered rights holder engagement that facilitated a community-based water resource management model. These efforts aimed to improve WASH governance and the enabling environment and thereby strengthen the climate resilience of WASH services across the country.

At the start of the activity, the most prominent data gaps included weather, inequality, WRM and climate change predictions that would better enable inclusive, climate resilient planning. In addition, the meaningful inclusion and participation of marginalised groups in WASH and WRM was identified as a priority.

## Case Study Highlights

This case study provides an example of strengthening gender equality, disability and social inclusion-related data in a national management information system to enable inclusive, climate resilient service delivery. It offers insights into how to share information and data to support decision makers at all levels, leverage financial investment in the WASH sector and foster coordination with non-WASH actors who have interests in water resources management and climate change.

It also provides an example of delivering a community water resource management model that is inclusive and empowering, that is, a program that can develop actions led by rights holder groups in partnership with sub-national government on climate, WASH, WRM and that provides better opportunities to engage groups experiencing marginalisation.

Partners took steps to form a national technical work group to coordinate the integration of climate, WRM and GEDSI indicators into the national WASH monitoring system. In addition, they led technical training, and the development of inclusive WASH and WRM approaches and tools for use by rights holder groups.

## GEDSI Activity Context and Objectives

Approximately 75-80% of the population of PNG reside in rural areas and largely rely on subsistence farming for their livelihoods.<sup>1</sup> Rural communities often have limited capacity to protect themselves from climate-induced natural disasters such as drought, flooding, landslides and storm surges. The rugged mountainous terrain as well as limited access to basic infrastructures, such as roads and bridges, has hindered rural communities' access to healthcare, education, WASH services and broader development opportunities. Women are particularly vulnerable due to the lack of access to land, income, credit and other resources including WASH. This lack of access impedes their ability to cope with climate stresses and disasters.

In 2019, WaterAid and the PNG National Research Institute undertook a gender and power analysis on the key barriers for women's inclusion in water management. The study found that culturally, Papua New Guinean women undertake a large burden of water collection duties, caring for children, the elderly and people living with disability.<sup>2</sup> With a changing climate, poor water security and resilience have significant impacts on women, girls and people living with a disability. Local rights organisations in Pacific Island countries are at the forefront of the climate emergency especially at the community level where most impacts are experienced, yet they often have limited opportunity to contribute meaningfully to national, regional, and global policy dialogue.

The findings of the gender and power analysis and the broader GEDSI context in PNG were used to inform the design of the national monitoring and community water resource management initiatives. The overarching goal of the activity was to build a strong enabling environment in PNG which would mean that key stakeholders were equipped with the policy, budget, programming and monitoring to ensure WASH

and WRM for all people in the country. Key stakeholders include the Department of National Planning and Monitoring WASH Planning and Monitoring Unit (DNPM WASH PMU), sub-national government and rights holder groups.

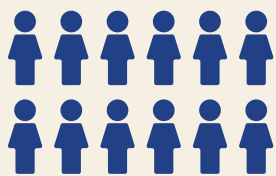
The three objectives of the activity were:

1. Strengthen capacity and skills of the DNPM WASH PMU to manage, administer and maintain the MIS to inform inclusive, climate resilient planning processes.
2. Enhance the agency of rights groups, particularly organisations of persons with disabilities and women's rights organisations, in WASH, WRM and climate change adaptation initiatives at sub-national level to increase community resilience.
3. Support national and sub-national government coordination to strengthen data to inform evidence-based planning, financing and inclusive, climate resilient service delivery.

*“Community-based water resource management is important to women and people with a disability because they are the most vulnerable groups of people in a community. They are affected most during unusual events like extreme weather conditions and are also vulnerable to water and foodborne infections and diseases. Women and people with a disability must be empowered and resilient to the impacts of climate change. Water must be accessible, clean, safe and equitable.”*

**Ms Winnie Sagi, Senior Environmental Health Officer, East Sepik Provincial Health Authority**

### Key Statistics



**9.1 million**

Population of Papua New Guinea (PNG)<sup>3</sup>

**50%**

of households in PNG have access to at least a basic drinking water service.

**19%**

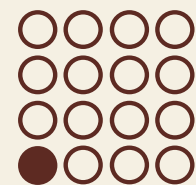
of households in PNG have access to a safely managed sanitation service.<sup>4</sup>



**9** River basins



PNG has an abundance of surface water resources, yet faces water shortages during droughts which cause severe food shortages.<sup>5</sup>



**28/191**

PNG is ranked 28 out of 191 countries in terms of risk to climate change and natural disasters.<sup>6</sup>

<sup>1</sup>Papua New Guinea's Voluntary National Review 2020- Progress of Implementing the Sustainable Development Goals. (2020).

<sup>2</sup>PNG National Research Institute (NRI) (2019) Baseline Study on Gender Equality, Disability and Social Inclusion (GEDSI) and Water, Sanitation and Hygiene (WaSH), Wewak District.

<sup>3</sup>UN Population Division Projections (2022) available at: <https://population.un.org/wpp/>

<sup>4</sup>Joint Monitoring Programme (2022) Data Table Water, Sanitation and Hygiene: <https://www.unicef.org/eap/media/10346/file/> Note: National data is not available on 'safely managed' drinking water service level.

<sup>5</sup>Climate Risk Profile: Papua New Guinea (2021): The World Bank Group

<sup>6</sup>2019 INFORM Index for Risk Management cited in Climate Risk Profile: Papua New Guinea (2021): The World Bank Group

## GEDSI Approach

To strengthen the national WASH MIS and ensure the participation of marginalised groups, WaterAid has championed GEDSI throughout the activity, and in the following components:

- Formation of a national technical work group to coordinate the integration of climate, WRM and GEDSI indicators into the national WASH MIS.
- Development and delivery of technical training on the WASH MIS, including GEDSI components, across three regions reaching 52 out of 96 districts, in preparation for broader DNPM roll-out of the integrated WASH MIS.
- Development of inclusive WASH and WRM approaches and tools for use by rights holder groups.
- Training on WRM, climate resilience and women's leadership developed and delivered to women and disability stakeholders.

WaterAid has supported the DNPM WASH PMU to establish a national, technical working group called the WASH, Water Security and Climate Change Integration Working Group, which meets every two months. This group includes representatives from the National Department of Health, National Department of Education, Department of Provincial and Local Level Government Affairs, Water PNG, National Weather Service, Climate Change and Department Authority (CCDA), Central Environmental Protection Agency (CEPA), Department of Agriculture and Livestock, development partners, key international non-governmental organisations, GEDSI service providers and disability advocacy groups.

In 2023 the working group undertook a process to integrate and enhance additional climate, weather, water resources and GEDSI indicators into the MIS. This included the integration of National Weather Service and Early Warning System climate data into subnational planning. To support the process, WaterAid and the DNPM WASH PMU designed and built a simple water security planning index drawing on water security, seasonality and coping questions within the DNPM WASH PMU rural community survey. Coping questions include those relating to communities' ability to manage water security pressures and climate impacts, for example, 'What are the reasons for water shortages in your area?' and 'What efforts have been undertaken to address the drought's impact in your community?'. Partners also worked with the DNPM WASH PMU to modify MIS displays to make existing gender and disability indicators more prominently displayed for planning purposes.

Two MIS administrator trainings for DNPM WASH PMU staff have taken place which included facilitated discussions on GEDSI indicators and national and subnational data needs. The discussion led to the development of several MIS GEDSI indicators that were reviewed by the working group and resulted in improvements to national data collection forms and the MIS.

To encourage the meaningful inclusion and participation of marginalised groups, WaterAid along with government and rights-holder organisation partners from the Wewak District WASH Committee developed a new district community engagement manual, called "Healthy Villages: Community WASH engagement". The manual includes activities such as community water point mapping, women's and men's group transect walks, water quality testing, water point hazard identification, water resource estimations using storytelling and simple volumetric calculations, and simple climate change impact mapping. These approaches have been integrated with locally used behaviour change approaches to sanitation and hygiene promotion, namely the Healthy Islands concept and Community Led Total Sanitation (CLTS).



### Healthy Villages: Community WaSH Engagement

Module 1



Pre-intervention  
community assessment



WaterAid

The manual aims to raise community awareness and understanding of GEDSI issues found in the gender and power analysis by integrating GEDSI activities and messages. These include community sessions about the gendered division of WASH labour, equitable community water allocation, and analysis of barriers to equal access and participation. WaterAid has contextualised and packaged the approaches into one tool with several modules that can be implemented at the community level. The context-specific approaches and tools are designed for use by rights holder groups based on their needs. They aim to amplify GEDSI responsibilities and the power of actors in WASH and WRM.

To share the manual and community-based processes, WaterAid supported the East Sepik Provincial Health Authority to facilitate a Training of Trainers for the East Sepik Council of Women (ESCOW) and East Sepik Disabled Person's Agency (ESDPA). The training aimed to develop participants' understanding and capacity to deliver community engagement sessions, understand climate change, catchment processes and water source protection, do water quality testing and plan for inclusive and resilient WASH community engagement activities using the new community engagement modules as their facilitation guide.

The training included 15 participants (14 women and one man) of which three were persons with a disability (two women and one man). Through the training, 10 communities within the Wewak district were identified for the roll out of the community based WRM. The East Sepik Provincial Health Authority, ESCOW and ESDPA then implemented the approach in 10 communities in a pilot to test the activities and approaches in the manual and further refine its content. During community sessions, when discussing their water resources and water resource management, the communities also discussed gendered aspects of water resource access which highlighted that in some communities different water sources are managed and accessed by women or men. Water quality testing was used as an entry point to discuss the contamination risks facing different water sources. ESCOW facilitated sessions also included community discussions about gender-based violence and information for communities on the local support referral pathways for women experiencing violence.



**Ms Winnie Sagi, Senior Environmental Health Officer (black t-shirt) from East Sepik Provincial Health Authority facilitating a Water Quality Test using the Aquagenx test kit for microbiological contamination as part of the training at the East Sepik Centre of Hope on 17th August 2023. (Source: WaterAid PNG/ Joyce Maragas)**

## Activity Impact

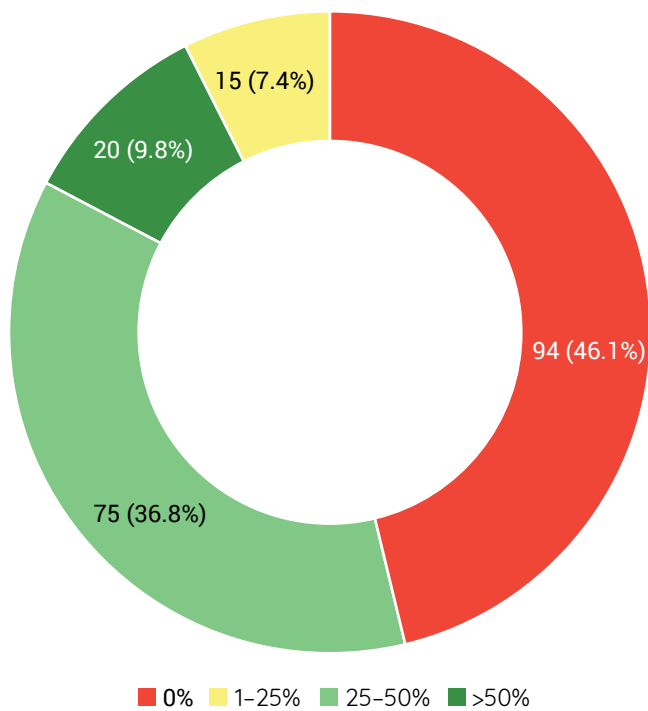
As a result of the review of the MIS data, 11 GEDSI indicators were revised or added to the MIS covering disability, gender and menstrual health. Example questions that were added into the national data collection forms and then displayed as new indicators on the MIS include the proportion of women nominated as decision makers by the community and the proportion of rural communities where water collection duties are shared by women and men. New gender and leadership indicators, such as the percentage of women represented on the WASH committee, were integrated onto the MIS displays (see Figure 1). Data on these indicators has been collected in 181 rural communities, and the GEDSI indicators have been used by two District governments to inform their five year costed WASH plans.

In addition, GEDSI data was made more prominent in the display of the data so that it can better inform decision-making. The DNPM WASH PMU and WaterAid made several practical adjustments to MIS displays, for example, a new gender-based disaggregation and the ability to filter data by specific geographical features that are relevant to water resources such as coastal areas, atolls, inland mountainous, and low lying plains. Over 108 subnational government officials have been trained in the MIS and associated planning system. Feedback from Wewak district stakeholders is that the new data shines a spotlight on GEDSI and has been useful to inform planning by the District WASH Committee.

As a result of training ESCOW and ESDPA to deliver community water resource management activities, both local rights groups have strengthened their facilitation skills and their technical knowledge on climate and WASH. This has role modelled what equal leadership looks like in practice to communities and East Sepik Province government authorities, positioning rights holder organisations as legitimate WASH and WRM leaders. ESDPA members facilitated discussions about the accessibility of water sources for people with a disability, and for some communities this was the first time they had had a person with a disability leading community discussions about disability equality, and many participants reflected that this activity challenged their perceptions and attitudes.

The implementation of the “Healthy Villages: Community WASH engagement” manual in Wewak District has led to some initial changes observed in the ten communities. In one community, Kambagora, within two days of seeing the results of the water quality testing the community had self-mobilised to construct two ventilated improved pit toilets at the school for the students. Several of the ESCOW members observed that meetings among the women in the community were key to catalysing changes in WASH facilities and behaviours. At one of the communities on Kairiru island, after participating in the sessions led by ESCOW and ESDPA, the community realised that their WASH decision-making processes had not included the most marginalised members of their community and they re-formed their community WASH committee to include women in WASH roles, and a person with a disability assumed a leadership role in the committee for the first time.

% of Women’s Representation on WASH Committees



**Figure 1: Improved WASH MIS dashboard: results of the GEDSI indicator % of women’s representation on WASH Committees**

Through activity monitoring on GEDSI indicators, it is evident that GEDSI was a key part of data collection and 50% of training participants reached were women. 15 people from ESCOW and ESDPA were trained and empowered to advocate on WRM, climate resilience and adaptation. The facilitated sessions have reached at least 160 community members so far (implementation is ongoing).

The GEDSI components of the activity have made contributions to strengthening the enabling environment through improved skills from MIS training, better coordination with the technical working group and more active rights holder groups empowered with manuals and training thereby better representing people experiencing marginalisation.

A range of communications materials have been produced, and experiences, perspectives, ideas, and needs of marginalised groups from Pacific countries shared into both regional and global forums. Training materials and outputs have been shared specifically with ESCOW so that the entire network can benefit from the tools and resources.

More broadly, the activity overall has seen a positive response as demonstrated by increased interest and commitment to the use of the national MIS data. Given the integration of some GEDSI data, this means that there will be more awareness of GEDSI considerations in decision-making and therefore programs are more likely to be more equitable and sustainable.

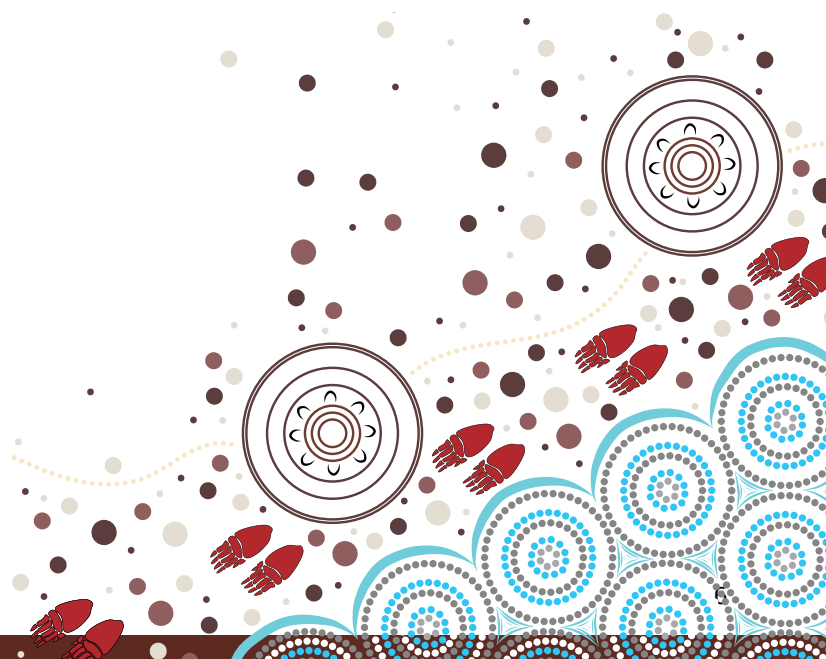
*Reflecting on her role implementing Healthy Islands in communities together with ESCOW: "As a person with a vision impairment ...I was given an equal opportunity to answer questions and improve awareness on disability. We were able to promote and strengthen disability social inclusion at the village or community level. This gives us confidence and courage, and it is also important to strengthen our partnership as well as the capacity building of both partner organisations."*

**Augusta Henson, Officer, East Sepik Disabled Person's Agency**

## Learnings

The DNPM WASH PMU and WaterAid undertook a consultation and review of gender and disability indicators in the national data collection forms. While GEDSI is highly integrated throughout the school and health care facilities forms, for example menstrual hygiene management questions, more robust integration is less possible in the rural community survey. Data collection for the rural community survey is undertaken at the community level (census unit) rather than household level. It is presently not possible to collect data at scale through household surveys due to financial and human resource limitations in the public service. This limitation means that the collection of more sensitive information relating to gender and disability is problematic. For example, asking the village WASH committee and ward recorders about menstrual hygiene management rather than the household or female respondent themselves. This means that to the extent possible, rights holder groups who represent the needs and interests of the community should be encouraged and supported to contribute to planning and decision-making, such as, through technical working groups.

It was very positive to work in partnership to achieve the GEDSI objectives. Partnerships with rights holder organisations can strengthen community-led WASH and WRM improvements. ESCOW's large grassroots network of women across East Sepik Province means they can mobilise community members in ways which complement the government's provincial structures such as the Provincial Health Authority's network of health centres and community outreach workers. As members of the communities where they are implementing the activities, ESCOW network members bring influencing networks and knowledge of traditional WRM practices. In addition, ESCOW and ESDPA also bring lived experience and a GEDSI depth of knowledge which they were able to integrate into the WRM-focused sessions.





It is important to consider that climate change is a relatively new topic for many PNG sub-national and GEDSI actors. Communities who participated in the sessions in the “Healthy Villages: Community WASH engagement” manual roll-out spoke about their personal experiences of climate change, such as rising sea levels causing coastal erosion and water source salinisation, and increasingly irregular seasonal patterns making it harder to employ traditional methods for predicting and preparing for wet and dry seasons. However, talking about what causes climate change and its expected impacts on water resources and daily life was seen as a new and technical topic that took time for GEDSI-focused organisations like ESCOW and ESDPA to become confident to facilitate. This will continue to evolve as implementation continues and awareness and understanding increases. Facilitators from ESCOW and ESDPA also relayed that community dialogues about climate change need to be context-specific. The experiences, risks and differing vulnerabilities between different people in the community varied based on the geography, culture and social structures in each community.

## Looking ahead

Partners remain committed to progressively strengthening PNG’s monitoring data and system to inform policy, planning and decision-making. The activity has led to requests from district officials for DNPM WASH PMU and WaterAid to provide training and support for district staff to roll-out the MIS in their respective districts.

This activity has contributed to national monitoring, and also provided experience from the Wewak district that will continue to be shared with other districts in PNG. WaterAid, in collaboration with ESCOW and ESDPA, are currently revising the “Healthy Villages: Community WASH engagement” manual, based on findings from the community pilot. WaterAid will continue to support ESCOW and ESDPA to roll out the approach in communities in the Wewak District under broader program funding.



For more information and resources, visit  
<https://bit.ly/AWP-GEDSI-Resources>



ESCOW facilitator, Jacqui, leads women to participate in a community ‘pocket voting’ activity. (Source: WaterAid/Isaac Thomas)