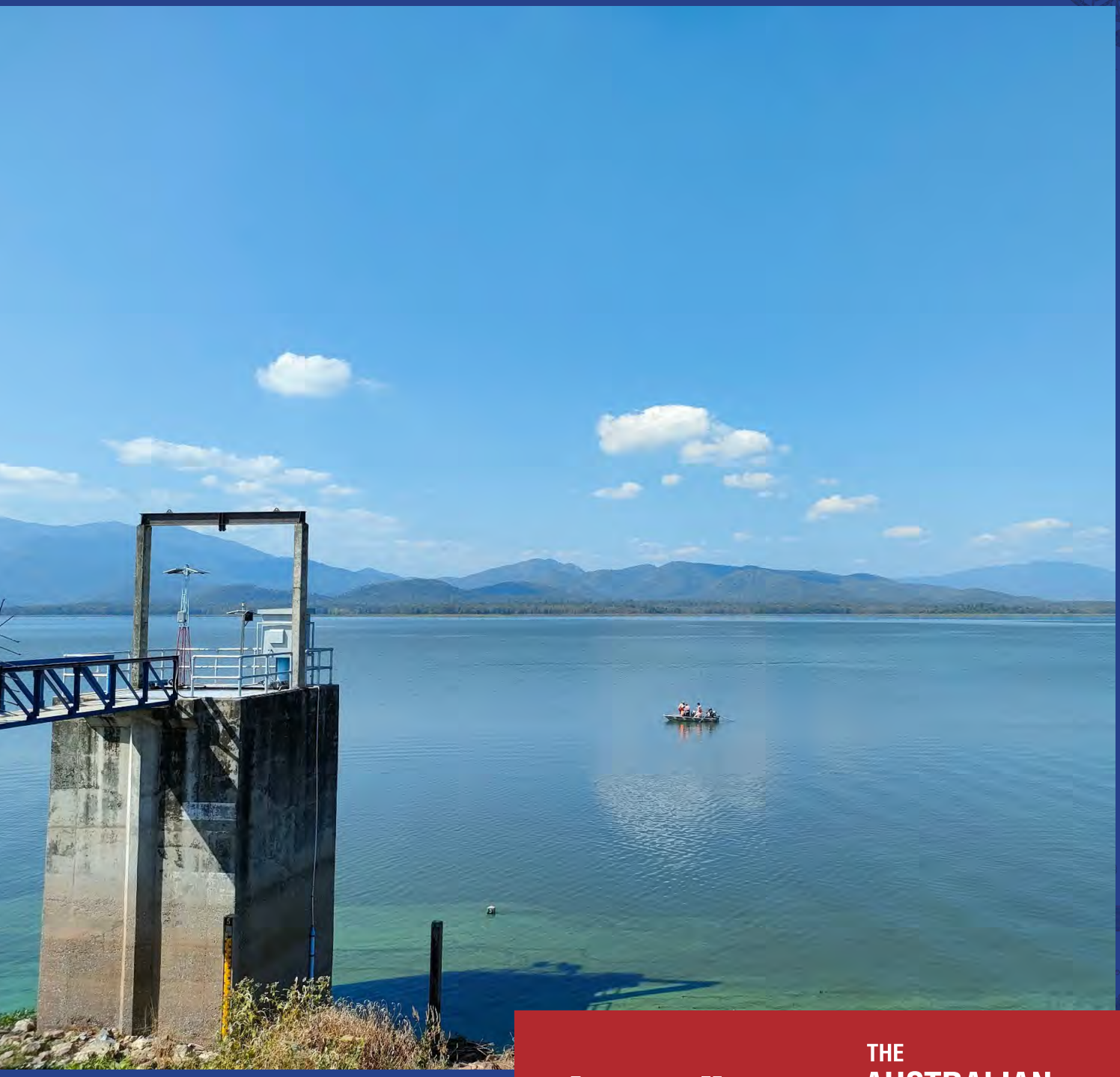
Thailand

Gender Equality, Disability and Social Inclusion Case Study

# TECHNICAL SUPPORT TO IMPROVE RESERVOIR WATER QUALITY MANAGEMENT IN THAILAND



**Partners**
Griffith University (GU), CSIRO, Sunwater, Thailand's Royal Irrigation Department (RID), and Chulalongkorn University

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**Cover photo:**
Tabsaloa Reservoir, Utaithani Province, Central Thailand showing clear signs of eutrophication with wide spread blue green algae scum. Source: RID, Thailand.

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## Overview

**As part of the ongoing water collaboration between Thailand's Royal Irrigation Department (RID) and Australia through the Australian Water Partnership, Australia and Thailand have undertaken experience sharing and knowledge exchange to support reservoir water quality management in Thailand. The activity included technical advice, two workshops, an exchange visit and the initial development of Reservoir Water Quality Monitoring Manuals. Gender Equality, Disability and Social Inclusion (GEDSI) was a key feature of this activity. Led by a GEDSI technical expert, a GEDSI context analysis was undertaken, and subsequent planning and training done to ensure due attention was given to addressing GEDSI issues and improving skills for ongoing programming.**



## Activity Background

Thailand has 25 large-scale reservoirs with a combined capacity of 9.5 billion cubic meters, 410 medium-scale reservoirs with a combined capacity of 5.1 billion cubic meters and 1060 small reservoirs under the responsibility of the Thailand Royal Irrigation Department (RID).[1] RID manages the water quantity and quality of all these reservoirs, which are crucial in supporting agriculture, energy production, household consumption, industrial demand, and ecosystem conservation.

Many external factors, including land-use, increasing demand, industrial pollution and climate change, are impacting the quality and quantity of water in the reservoirs. The expansion of agriculture surrounding the reservoirs and the improper application of fertilisers and pesticides, along with disposal of animal manure, is leading to eutrophication. This requires improved monitoring, management, communication, and education practices, to ensure safe consumption and usage for water users.

RID requested Australian expertise to gain knowledge and strategies to monitor, prevent and mitigate water quality impacts, and to ensure that high water quality resources remain accessible to members of socially vulnerable groups. In addition, RID aimed to work with various groups to increase understanding of the role water users play in contributing to and managing water quality.

The activity involved investigating approaches to improve monitoring and water management responses in a target reservoir in the Huai Kraseaw sub-watershed in Central Thailand, with a view to informing broader water quality management across the country.

## Case Study Highlights

This case study provides a practical example of the application of AWP's Gender Equality, Disability and Social Inclusion Policy, which prioritises addressing GEDSI aspects in an activity in particular ensuring meaningful participation of all stakeholders.

It also shares an example of a GEDSI context analysis, which was undertaken to determine the GEDSI approach to each of the tasks in the reservoir water quality management activity. The context analysis ensured GEDSI concepts were implemented throughout the activity methodology including the workplan, participant selection process, training, case studies and the exchange visit to Australia. In this case a GEDSI technical expert provided specialist advice and training, and in doing so championed GEDSI and assisted in building the skills of partners to deliver the activity.

The investments in GEDSI expertise, analysis and guidelines are examples of GEDSI inclusive and empowering approaches. The proposed strategy to employ more female graduates at RID is an example of the potential for beneficial attitudinal change that supports a shift in the attitudes of men and women working in engineering to see and encourage female role models.

[1]Thailand's Royal Irrigation Department Smart Water Centre Operations database

## GEDSI Activity Context and Objectives

To strengthen reservoir water quality management in Thailand, Australian and Thai experts, supported by the Australian Water Partnership, collaborated on the drafting of water quality monitoring manuals for the target areas, and supported the capacity building of key RID staff through training in Thailand and an exchange visit to Australia.

The objectives of the activity were to:

1. Exchange knowledge, experiences, and standard methodologies of reservoir water quality management between Australian partners and the RID Water Quality team; and

2. Develop a manual for implementation strategies and guidelines on reservoir water quality monitoring, and eutrophication prevention and mitigation in Thailand.

This case study focuses on the GEDSI components of the activity, which were important to the activity approach and involved the application of AWP's GEDSI Policy. The main objective was to ensure GEDSI principles were applied to the approach. A key component was a GEDSI context analysis led by an Australian GEDSI technical expert.

Partners in the activity held, and continue to hold, a commitment to the principles of equity, diversity and inclusion and social justice in delivering the United Nations Sustainable Development Goals. GEDSI considerations are important in the Thai context as people face the negative impacts of a changing climate, such as increased flood risk.

In the context of reservoir water quality management, it is necessary to understand and work to mitigate negative impacts on the life experiences of women, girls, older women and widows, people with a disability, community residents who are not landowners, and members of other socially vulnerable groups. For example, hose at risk include women who manage farms, engage in canal system maintenance, collect fish and vegetation as food from upstream and downstream sources for subsistence and livelihood purposes, market fish and water-sourced food for cash income, and care for family and community members. Women and people with a disability are most vulnerable to climate change induced disasters such as flooding. For example, some may not possess the physical strength to escape flood waters, some may need to supervise children who may drown in or become ill from polluted water sources, while others may be abandoned in an initial panic. This is why a GEDSI approach was undertaken with a view to pursuing the benefits of a rights-based approach to integrated water management.

It was also important in the Thai context to increase understanding of the role that all water users play in contributing to water pollution, and to look for ways to collaborate on water management and caring for the local environment.

*"As RID endeavours to maximise the benefit from water resources, support appropriate water use and maintain water quality, we understand the importance of a GEDSI approach that engages all water users, particularly those living in the area. This is because their actions have an impact on water use and water quality and so we need to work together."*

***Areerat Anuchon, Senior Professional Hydrologist, Office of Water Management and Hydrology, Royal Irrigation Department in Thailand***

### Key Statistics

**71.8 million**
Population of Thailand[2]

**100%**
of Thailand's population with access to basic drinking water.[3]

**26%**
of households in Thailand have access to a safely managed sanitation service

Thailand has **25** large river basins.[4]

**> 2 million people**
will be affected by an extreme river flood by 2035–2044 and 2.4 million people will be affected by coastal flooding by 2070–2100.[5]

[2]UN Population Division Projections (2023) available at: https://population.un.org/wpp/
[3]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.
[4]Prasit Prakongsri & Toansakul Santiboon (2020) Effective Water Resources Management for Communities in the Chi River Basin in Thailand, Environmental Claims Journal, 32:4, 323-348, DOI: 10.1080/10406026.2020.1765529
[5]World Bank (2021) Climate Risk Country Profile, available at: https://climateknowledgeportal.worldbank.org/sites/default/files/2021-08/15853-WB_Thailand%20Country%20Profile-WEB_0.pdf

## GEDSI Approach

A GEDSI context analysis, as undertaken in this activity, assesses a given situation, context or work environment for gender equality, disability and social inclusion issues. It then develops responses that target gaps between people of different gender, disability and social identities and addresses GEDSI inequalities.

A context analysis was undertaken to determine the GEDSI approach to each of the tasks, ensuring GEDSI concepts were implemented throughout the activity methodology including the workplan, participant selection process, training, workshops and exchange visit to Australia.

The activity team included an Australian GEDSI expert who provided technical guidance and training on GEDSI approaches. To inform the activity plan and tailor the training in Thailand and workshop in Australia, a GEDSI questionnaire was sent to the RID team to gauge their level of awareness and understanding of GEDSI principles. Given the mixed levels of understanding and to ensure attention was given to the importance of GEDSI, the technical expert developed training that covered what GEDSI is, the international conventions that frame a human-rights based approach to activity planning, and descriptions and examples of why and how GEDSI should be included in irrigation, water security, and climate change planning and management.

The training and workshop sessions considered how to address GEDSI in an activity's action plan and reviewed relevant legal and political frameworks and resources. The training covered an introduction to a GEDSI continuum,[6] and participants looked at the importance of developing clear statements about the policies and the activity's GEDSI actions to move it along the continuum from an approach that was potentially harmful due to ignoring GEDSI issues, through to an approach that was responsive to GEDSI, and onwards towards effective GEDSI transformative programming.

Transformative programming addresses harmful social norms and power imbalances to positively change the position of people experiencing marginalisation. As part of the visit to Australia, a GEDSI workshop was held for the two female and two male representatives from RID and the Thai Department of Agriculture.

The approach supported the Thai team to review GEDSI issues in their local context and determine strategies to achieve meaningful participation and equitable sharing of the benefits of water management activities. Key to the GEDSI approach in this case study was an explanation of 'intersectionality', that is, the ways in which people have multi-layered social identities, which is crucial to the consideration of how power and influence enable or inhibit effective participation of community members and stakeholders. This was particularly important when engaging with all water users; if some were not able to do so for various reasons such as a physical barrier to a meeting, or taboo around speaking up in a group meeting, then these groups would miss out on informing and being informed by new water management practices, including maintaining improving water quality.

## Key resources

- Water for Women 'Gender Equality and Social Inclusion Self-Assessment Tool' (2021): Facilitation guide for WASH project managers, researchers and self-assessment facilitators
- Australian Department of Foreign Affairs and Trade (DFAT) Human Rights and Social Safeguards
- CBM Consulting (2023) Disability equity within humanitarian preparedness response and recovery

**Activty team undertaking water quality sampling with RID and Chula University staff on Maengad Reservoir, Chiang Mai Province, Northern Thailand. Source: RID, Thailand**

[6]A 'continuum' is a tool to develop 'levels' or 'markers' to guide GEDSI approaches to achieve continually deeper equality outcomes. Continuum tools usually have 3-4 levels or markers and are often adapted by development organisations to suit their context.

## Activity Impact

As a result of the GEDSI approach, partners increased their understanding of the importance and practical activity benefits of GEDSI, and also improved their ability to engage with groups experiencing marginalisation and advocate for shared management of water resources. Within RID, an online GEDSI workshop held in February 2024 reached more than 200 participants.

Three initiatives were developed as part of an ongoing GEDSI action plan. These were:

- A review by RID into how they conduct community engagement programs to ensure there is a socially inclusive audience at these meetings.
- A proposed strategy to employ more scientists into the water quality monitoring team at RID, which will help to promote the employment of more female graduates and improve the gender equity balance in technical roles within the organisation, where the gender balance is currently skewed towards male engineers.
- Draft versions of, and ongoing support for RID to develop and implement guidelines to ensure community engagement programs are socially inclusive.

A community engagement session held in March 2024 in Brisbane, Australia, was filmed and is being made available to RID staff via an online training session in April 2024. Core learnings from the session are:

- Government and internal organisational policies and procedures relating to GEDSI diverse employment must be actioned, with strong monitoring of GEDSI outcomes.
- Training programs that are designed with and targeted for people with a disability are instrumental in ensuring that people with a disability move into longer-term employment.
- Engaging with multiple socially diverse groups as stakeholders, and with relevant peak bodies, as key components of working parties can enhance an organisation's diversity and drive new initiatives.
- Reflection upon monitoring, evaluating and learning (MEL) from outcomes via a specific GEDSI MEL program run, for example, every 12 weeks, can obtain and then drive progress from commmunity engagement participants' feedback.
- A GEDSI MEL reflection can be based on feedback gathered online, via an analog form, verbally via a telephone conversation with a staff member as part of a Quality Control team, and from direct community engagement activities.

*"When invited to participate in engagement sessions, and when plans to include women, people with a disability and members of socially vulnerable groups are well-considered and arranged, they are keen to contribute and are vocal with potential recommendations. Women can be invited not only to be part of local Water User's Groups, but to lead them. People with a disability can be invited to speak about their specific needs, and leaders of local Organisations of Persons with Disability can contribute about wider requirements. Widows, elders and youth can also be invited to contribute, thereby enabling a broader range of voices to be heard, to assist in simultaneously co-educating community members, and to enhance the economic activities associated with water utilisation and canal system maintenance via the Water User's Group."*

***Professor Helen Johnson, Griffith University***

Throughout the activity, GEDSI was emphasised and integrated into the approaches and outcomes. The adoption of GEDSI principles led to the drafting of guidelines by Australian experts to ensure social inclusion in community engagement activities, the promotion of employment of female scientists in technical roles, and the recommendation for an RID female technical staff member to undertake at Griffith University, Australia.

The proposed increase in scope of the RID water quality monitoring program will require additional human resources and the Australian team has recommended that RID recruit environmental science graduates to fill these roles. This would lead to the engagement of more professional female employees to improve gender equity and greater diversity of technical skillsets.

The activity achieved important progress in bilateral cooperation between Australia and Thailand based on the exchange of knowledge and experiences on reservoir water quality management. The partnership has resulted in detailed and long-term cost-effective strategies being developed. There has been joint activity implementation and work on the development of Thailand's guidelines for reservoir water quality monitoring, and eutrophication prevention and mitigation.

## Learnings

Through the GEDSI lens in this activity, RID personnel have increased their understanding of GEDSI principles and approaches, including the importance and opportunities to addressing GEDSI in their own organisation and beyond. Through trainings, partners learnt that they needed to strengthen social inclusion in community engagement, particularly when engaging and communicating with people with a disability. Tools were developed to support this such as a checklist of actions and GEDSI-based questions, and a report-card system to check that GEDSI activities are continuing throughout an activity project.

During discussions at the training session, the importance of incorporating GEDSI considerations into irrigation, water security, and climate change planning and management was emphasised. One observation that emerged was the frequent lack of budget allocated for GEDSI activities with communities and Water User's Groups. Additionally, many participants, not being social scientists, often fail to recognise the benefits of collaborating with local communities. To address this gap, training sessions, workshops, and exchange visits were organised to enhance recognition and knowledge about GEDSI within RID.

Research is showing that engaging a GEDSI technical expert is very helpful, but GEDSI is most effective when interwoven throughout an organisation's culture and its activity design, planning, implementation and monitoring, evaluation and learning. There is a strong argument for GEDSI training during RID staff inductions plus ongoing, regular training, for ensuring that more women are employed and more are effectively promoted to decision-making positions throughout the organisation, and that GEDSI is more efficiently mainstreamed in all activities.

**Activity team meeting with Director and senior staff of ROI2 Office, Keawlom Reservoir, Lampang Province, Northern Thailand. Source: RID, Thailand.**

## Looking Ahead

The GEDSI initiatives enabled the creation of RID guidelines on inclusive community engagement, which have the potential for measurable and lasting cultural change within RID as an organisation and importantly with stakeholders and within communities.

The GEDSI technical expert continues to provide context and advice focussing on gender issues in the water sector in support of gender equality and the mainstreaming of GEDSI throughout the training and capacity building activities.

A positive outcome of the activity is the potential to influence reservoir water quality management practices more broadly across Thailand and ensure due emphasis on GEDSI aspects. The forthcoming finalisation of RID's Reservoir Water Quality Monitoring Manuals provides an opportunity to strengthen inclusive, integrated water management.

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

**Activity team undertaking water quality sampling with RID and Chula University staff on Pranburi Reservoir, Prachuabkirikhan Province, Southern Thailand. Source: RID, Thailand**

*The AWP recognises that the integration of gender equality, disability, and social inclusion leads to more equitable and sustainable outcomes. The AWP GEDSI Policy (2020-2023) and Strategic Plan (2023-2028) reinforces the AWP's commitment to value and promote inclusion and diversity by prioritising the most poor and vulnerable. This case study is an example of the AWP's activities towards the delivery of the Sustainable Development Goals.*