Partnerships for a Resilient and Climate Smart Water Sector Program

Monitoring, Evaluation and Learning Report

Prepared for Australian Water Association

By Institute for Sustainable Futures, University of Technology Sydney

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- Vietnam Water Supply and Sewerage Association (VWSA) and AWA
- Pacific Water and Wastewater Association (PWWA) and AWA
- Indonesian Water Association (PERPAMSI) and AWA
- Tirta Musi and Yarra Valley Water
- PT. Air Minum Giri Menang and TasWater
- Hoa Binh Clean Water Company and Cassowary Coast Regional Council
- Can Tho Water Supply and Sewerage Company and Urban Utilities
- Tonga Water Board and Unitywater
- Solomon Water and Goulburn Valley Water
- Phu Tho Water Supply Company and Coliban Water
- An Giang PCERWASS and Riverina Water

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Photos: AWA team members and Melita Grant

About the authors

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Introduction

Climate resilient water utilities require systems, processes, policies, leadership, technologies, and data management to anticipate climate risks, and to mitigate them. A functioning water utility and water management system is fundamental to society and builds community resilience through the provision of safely managed services, especially in times of climate induced disasters.

Water utilities in the Asia Pacific region are at the front line of climate change, and often do not have adequate resources to manage impacts such as floods, droughts, saltwater intrusion, and tropical cyclones which damage water and sanitation equipment and systems and reduce water quality. At the same time, water losses, capacity and human resources needs, and remote and challenging contexts make the roles of water utilities in our region especially challenging.

Water associations play important roles in supporting learning and connection between their members, advocating for policy and practice change to better support water and wastewater services, and connecting to international actors such as other associations, multilaterals, and donors. Their roles in supporting water and wastewater utilities to manage climate change is increasing.

The Australian Water Association (AWA), supported by the Australian Government via Australian Water Partnership (AWP), and in collaboration with international association partners in the Pacific, Indonesia, and Vietnam, continues to support water and sanitation utilities and associations in the region.

In 2022, building on the success of the previous Water Utility Improvement Programs that AWA has developed and facilitated since 2017, AWA developed a newly structured partnership program to build the capacity of utilities and associations who wished to be part of the partnership program.

As a result, between 2022 – 2024, eight international utilities, four international associations, and eight Australian water utilities were matched and commenced a targeted partnership program to share knowledge, build technical capacities, increase climate resilience, and improve gender equality and inclusion within their organisations. Program partners were from Tonga, Solomon Islands, Samoa, Indonesia, Vietnam and Australia.

In-person and online scoping meetings, semi-structured interviews, and discussions between international water utilities and AWA project team in late 2022 and early 2023 revealed a range of priorities for knowledge exchange and capacity building for associations and water utilities as part of the partnership program.

A Theory of Change was co-created following consultation interviews and workshops with partner utilities and associations, supported by the Institute for Sustainable Futures (UTS-ISF). See Figure 5.

This monitoring, evaluation and learning (MEL) report brings together learnings from the program, structured around the theory of change intermediate outcomes which were designed to be achieved within the eighteen-month funding period and are as follows:

1. Increased capacity of associations through association-to-association partnerships

2. Increased capacity of utilities through utility-to-utility partnerships

3. Increased engagement and knowledge sharing between utilities and associations

4. Documentation and sharing of effective practices with associations, utilities and AWP partners

This MEL report also reports on in Gender Equality, Disability, and Social Inclusion (GEDSI) activities and outcomes, although these have been identified as end of program outcomes (3-5 years). Climate resilience was also a cross cutting theme which is also reported upon within each intermediate outcome area.

A summary of achievements under each of these key outcome areas is now provided.

Outcome area 1. Increased capacity of associations through association-to-association partnerships

Association to association partnerships were developed under the Program, between AWA three associations based in the Asia-Pacific: the Pacific Water and Wastewater Association (PWWA) the Vietnam Water Supply and Sewerage Association (VWSA) and the Indonesian Water Association (PERPAMSI). The program built upon existing relationships, fostering collaboration through action plans tailored to each association's needs and leveraging AWA's expertise.

A Community of Practice workshop in October 2023 saw over 20 association participants, including senior leaders, share insights into their organisational structures, policy focus and member services. The workshop facilitated knowledge exchange among PWWA, PERPAMSI, VWSA and AWA.

A communications workshop for PWWA in September 2023 led to a strategy development session in December, which focused on major event planning. In January 2024, AWA shared event management strategies with PWWA, aiding their planning for the 2025 conference. Similarly, AWA assisted VWSA with member database management and communications in January 2024, leading to a technology requirement brief to help VWSA identify suitable IT solutions.

Throughout the program, AWA facilitated various interactions and workshops to enhance the partnerships. In March 2024, webinars between AWA, PWWA, and PERPAMSI focused on data, member engagement, and advocacy, showcasing successful member-driven initiatives. In January 2024, VWSA actively participated GEDSI training in Vietnam, followed by an online session in April to discuss the implementation of learned lessons. The VWSA has said publicly that they would like to scale up the program and see great benefit of the GEDSI training and follow up session for all Vietnamese water utilities.

AWA maintained regular meetings with PWWA, including targeted discussions to support the PWWA conference in 2023. Meetings with PERPAMSI in late 2023 and early 2024 focused on implementing their action plan, involving members Giri Menang and Tirta Musi.

AWA also engaged with VWSA through face-to-face and online meetings, tracking progress and planning implementation.

All three associations participated in the Ozwater conferences in 2023 and 2024, discussing international partnerships for climate resilience. AWA attended and supported the PWWA conference in Palau and Vietnam Water Week 2023, presenting on extreme weather responses and supporting knowledge exchange.

The partnerships focused on enhancing member value, supporting advocacy, and improving communication strategies. PERPAMSI's action plan aimed to increase member value through utility-utility mentoring. PWWA's action plan emphasised capacity building in communications and knowledge exchange. VWSA's plan aimed at effective member communication and database management, promoting GEDSI activities, and sharing climate resilience practices.

Cross-association learning was facilitated through the Program, such as through a webinar in October 2023 and March 2024, which addressed common themes such as business resilience and member insights. This collaborative approach resulted in valuable knowledge sharing, with participants finding the content useful for their respective associations, and in relation to what they offer their members.

Please see Section 3 for further information on this outcome area.

Outcome area 2. Increased capacity of utilities through utility-to-utility partnerships

Eight utility-to-utility partnerships from Indonesia, Vietnam, Tonga, and the Solomon Islands were evaluated for this report. These partnerships started with the co-creation of action plans and involved 28 study tours with 91 participants from the Pacific, 262 from Asia, and 289 from Australia (total of 642 people taking part in study tours).

Workshops were held on a range of topics including risk management, incident management, non-revenue water, IT systems, gender-based violence policies, customer support, and water treatment plant management.

The partners maintained regular communication, often through Zoom and WhatsApp, fostering strong collegial relationships. Representatives from all partner organisations participated in the Ozwater'23 and Ozwater'24 conferences, contributing through panel presentations, partner meetings, workshops and strategic meetings. Additionally, Tonga Water Board and Solomon Water co-presented with AWA at the 2023 PWWA Conference in Palau, sharing their partnership experiences and outcomes.

The partnerships led to significant outcomes across multiple areas: climate change action, learning and knowledge exchange, technology, new processes, GEDSI, policy, practice, leadership, confidence, career development, and customer/community engagement. The program enabled participating utilities to drive organisational changes in technical domains and across their organisational systems. These changes were guided by learning goals set at the program's outset, and participants gained valuable insights through various activities and interactions as evidenced by through surveys and interviews.

Surveys conducted before and after the study tours revealed a deeper involvement of utilities in technical and non-technical areas such as new processes to improve efficiency, water quality, reduce leakage, and enhance worker safety; new technologies to manage water losses, automate systems, and provide better oversight; and learning on topics from incident management to smart metering and gender-based violence policies.

Climate change actions included managing saltwater intrusion, reducing water losses, and improving early warning systems. Other notable changes involved new practices and policies, increased awareness of GEDSI, and enhanced confidence, leadership, career development, and customer and community engagement.

Overall, the program improved water management practices across the participating utilities (both international and Australian). It equipped participants with tools and resources to reduce water waste and leakage, foster a safety-conscious culture, and build technical expertise. Organisational policy changes, process upgrades, and best practices around water management and business approaches were recurring themes reported by participants.

For more information related to the utility-to-utility partnerships, please see Section 4.

Outcome area 3. Increased engagement and knowledge sharing between utilities and associations.

The program enhanced relationships between associations and their water utility members through various activities and engagements. PERPAMSI participated in study tours with members from Australian partners Giri Menang in Tasmania (hosted by TasWater) and Tirta Musi in Melbourne (hosted by Yarra Valley Water), as well as outbound tours in Lombok and Palembang. VWSA and its water utilities attended GEDSI training in Phu Tho and Can Tho in Vietnam, actively participating in these sessions. Following Ozwater'23, PWWA joined Tonga Water Board on a study tour to Unitywater in Southeast Queensland, and in early 2023, AWA staff travelled to PWWA offices in Samoa to co-design action plans. VWSA also attended study tours hosted by Hoa Binh Clean Water Company, Can Tho Water Supply and Sewerage Company, and Phu Tho Water Supply Company, along with an inbound study tour hosted by Urban Utilities in Brisbane.

Engagement with AWA and member utilities led to a deeper understanding of increasing member value, diversifying learning offerings to members, and the importance of effective communications. One association, as a result of the program, began enhancing data management for better communication with members, while another started improving member communications by taking on a communications volunteer. One association increased utility to utility mentoring, facilitated by the association.

Although the outcomes of these improved engagements are long-term (between associations and utilities), fundamental steps have been taken, including better understanding members' needs and improved management of member engagement and communications.

Dedicated time during the Lombok study tour in 2023 was spent strengthening relationships between PERPAMSI, Giri Menang, and AWA through focused discussions and workshops. AWA attended the PWWA conference in 2023, facilitating targeted meetings between AWA, PWWA, DFAT, ADB, the World Bank, BecaHunter H20, and Pacific utility partners. PWWA and AWA supported member utilities through various engagements with Tonga Water Board and Solomon Water, developing their knowledge exchange capacities via workshops, meetings, communication products, and presentations, including a co-presentation at the August 2023 PWWA Conference in Palau.

Multiple design meetings enabled PWWA and AWA to support Solomon Water, Goulburn Valley Water, Tonga Water Board, and Unitywater in presenting program outcomes at Ozwater'24. They also participated in a panel focused on water associations' roles in achieving climate resilience. AWA and VWSA organised online meetings with Vietnamese and Australian water utilities to provide cultural awareness and instructions on developing action plans, facilitating inbound and outbound study tours and coordination between utilities and associations.

Please see Section 5 for more information on this outcome area.

Longer term outcomes: GEDSI

The program demonstrated a clear improvement in understanding the benefits of inclusive GEDSI practices, contributing to the overall outcomes. All action plans were developed with GEDSI ideas, informed by an external independent GEDSI specialist from UTS-ISF.

Vietnamese partners particularly embraced the inclusion of GEDSI in their programs. In January 2024, a Vietnamese GEDSI with UTS-ISF and AWA, conducted GEDSI training in Vietnam, supported by the Vietnam Water Supply and Sewage Association (VWSA) and the National Center for Rural Water Supply and Environmental Sanitation. Training sessions in Can Tho and Phu Tho engaged water utility representatives and senior management, addressing GEDSI issues specific to Vietnam and supplemented by Australian and international perspectives.

Four initial sessions were held in January, followed by additional sessions in April to follow up on utility's plans for enhancing GEDSI within their operations.

GEDSI pre-study tour trainings were also provided, ensuring participants were aware of GEDSI considerations before departing Australia. Partners proactively included women and Young Water Professionals (YWPs) in the program, resulting in 201 women and 431 men participating in study tours, and 29 women and 53 men in international activities at Ozwater'23 and Ozwater'24. YWPs, particularly those under 35, were encouraged to present during study tours. A workshop on GEDSI concepts and approaches was provided by the external GEDSI expert to ensure all AWA team members had a common understanding and approach to GEDSI in the program.

Women were prominently included in panels, public presentations at both Ozwater events, study tours, and webinars. The program's GEDSI activities led to several key GEDSI outcomes. Women were promoted as role models, being selected for the program, featured in videos and social media, and given opportunities to speak publicly and represent their organisations. Confidence among women increased, as reported in interviews, with participants expressing new ideas and confidence in implementing them, and managing family and caring responsibilities (to be part of the program) without significant challenges. Career development was also positively impacted, with both international and Australian participants indicating the program supported their career growth and enhanced their leadership capabilities.

Additionally, follow-up sessions with senior management and staff from Vietnamese water utilities showed that each utility had plans to deepen their GEDSI efforts and a better understanding of their baseline gender parity issues. These comprehensive GEDSI activities not only promoted inclusivity but also facilitated significant personal and professional growth among participants, contributing to the program's overarching and longer-term goals.

For more information on GEDSI within the program, please see Section 6 and the Case Study.

High level findings

High level findings on outcomes achieved throughout the program implementation period of 18 months revealed that partners who were part of the partnership program reported tangible changes and upskilling particularly in relation to:

1. **Implementation of new processes** – such as risk management sessions developed and implemented; non-revenue water (leakage) reductions due to pressure management and metering; significant operational improvements, especially in automation systems for water treatment plants and new customer engagement processes.
2. **Implementation of new technologies** – including the design of new SCADA systems[1] to reduce leakage and improve climate resilience; application of advice on improving screens for automation; and water treatment and water storage hardware to reduce non-revenue water.
3. **New learning and knowledge** – Including learning about smart water meters technology and reading; IT system plans; technical support and assistance with mapping water and sewerage systems; Adapted Certificate 4 training on work health and safety[2] and implementation by partners; communications and marketing strategies, revenue generation, and conference planning.
4. **Climate change actions** – Including implementing early warning systems to manage climate change disasters and impacts; climate resilient solutions to address saltwater intrusion into surface water sources; and reducing water losses to build resilience and manage drought more effectively.

Other changes noted related to new practices and policies, greater awareness of GEDSI (and development of action plans), increased confidence, leadership and career development and customer and community engagement.

"This twinning program is an excellent platform where information and technical know-how is shared, and problems are addressed. It is an amazing platform, and it should be continued specially for utilities in the Pacific" Partner from Pacific water utility

"I think [our partner water utility from the Pacific] may have a lot of real-life experience [on climate change proofing and readiness] and I am keen to learn from their experience to apply it to our own projects and operations. I work on high complexity projects that include Sewage Treatment Plant (STP) upgrades and we have to future proof design to increase resilience to natural disasters and climate change risks (Flooding, rising sea levels, bushfires…) so I am certain the disaster preparedness discussions will be beneficial for me." Australian Utility Partner

Insights to inform future partnerships

Recommendations for future partnerships include building on the existing positive ways of working and outcomes from the program delivered from September 2022 – May 2024.

The lessons learned are categorised in terms of program design, program delivery, feedback about program value, GEDSI and climate change related learnings. Each lesson learned is supported by evidence, as well as a response and recommendations which have been co-developed with the AWA team, as detailed in Section 10. In summary, the lessons learned included:

- Program design: The **scoping period** proved to be essential for the successful identification and matching of partners, as well as for addressing key issues. Most

[1] Supervisory Control and Data Acquisition (SCADA) systems are used for controlling, monitoring, and analysing industrial devices and processes. The system consists of both software and hardware components and enables remote and on-site gathering of data from the industrial equipment.

[2] Certificate IV in Work Health and Safety - teaches participants the knowledge and skills to work within an organisation as a WHS safety advisor, assessor, officer or supervisor.

importantly, it allowed AWA and partners to build strong relationships. Participants expressed the importance of co-design sessions on program goals and objectives at the start of the program to ensure everyone was on the same page.

- Program design and delivery: A range of **issues and themes** emerged across the partnerships of **mutual interest and action**. These included reducing water losses as a climate change adaptation (and mitigation) action; improving asset management; water quality management and improvements, modernising IT and billing systems; and GEDSI.
- Program design and delivery: Program partners from both Australia and internationally significantly increased the value of the overall program, and outcomes, through their **generous in-kind co-contributions** in the form of staff time and expertise, catering and logistics for study trips.
- Program delivery: **High quality facilitation and translation support** were a critical ingredient for program success – from AWA and also, professional interpreters coordinated by AWA.
- Program design: **Trusting friendships** and personal connections are the common denominator across all partnerships. While it takes time to understand different cultures, which is key to working together, the benefits are profound and, in many cases, resulted in long term connections.
- Program design and delivery: Learning is fast, **implementing changes can take more time**, although some utilities have implemented pilots and new processes during the 18 months partnership. Deeper organisational change has in some instances commenced, but will take time to be deeply embedded.
- Program design: Some participants said that they wished there was **more time for the study tours** and suggested that some longer-term options be included such as work placements/exchanges.
- Program design and delivery: Future programs should **build on enablers and successes** such as high-quality support and AWA facilitation, and **management within partner organisations being on board** and embedded in the partnerships to enable time for staff to participate. Having senior and middle management within partner organisations being supportive to enable time for staff to participate is important, otherwise staff feel that they have to do the program in their personal time, which can lead to stress and pressure. The **merits of the partnership program** (for both Australian and international participants) need to be shared, informed by this evaluation.
- Program design: Having a **consistent connection between organisations** (facilitated by AWA), and longer-term partnership span is needed for implementation outcomes to be fully realised. Future programs should be set up for at least three years, in order to maximise on the relationship development, learning and implementation of learnings.
- GEDSI: **GEDSI actions** delivered were appropriate and successful, and now that partnerships are further developed, more GEDSI activities could be incorporated into future phases of the program based on the identified needs of partners and the most useful ways of working in each context, informed by local GEDSI partners and experts. In Vietnam, the VWSA has publicly stated that they would like to see the GEDSI training rolled out to more water utilities across the country, and feedback was extremely positive from participants.
- GEDSI: The program achieved a **good gender balance in terms of the people selected** to be part of the program and those taking part in study tours, conferences and other opportunities for people to be showcased and shown as role models (for example the videos, social media posts, and newsletter stories). Approximately 33% of participants were female, with far exceeds the gender parity within most water utilities internationally.
- Climate change action: **Climate change and disaster risk reduction** activities were

numerous and varied. All participants acknowledged the interconnections between reducing water losses and building resilience of the water utility itself, as well as reducing demand on water sources that are under pressure, impacted by climate change, or of poor water quality (high turbidity for example).

- Program design and delivery: The partnership program has **significantly enhanced the confidence and career development** of both Australian and international participants. This includes improvements in technical skills, public speaking, and the advancement to more senior roles by showcasing leadership abilities.
- Program feedback about value: Increased engagement was observed across and within Australian water utilities, fostering better understanding of diverse roles within the organisations and promoting coordination and morale. As a result, **regular cross-organisational sharing** has begun in some Australian utilities, influenced by insights gained from the partnership program.
- Program design: it would be useful to simplify and translate some of the **Australian standards and guidelines**, such as those produced by the NSW Water Directorate into different languages based on partner needs.
- Program delivery: The "people-people" connections developed through the program are indisputable and have been life changing for many participants. As a **diplomatic contribution**, the program has exceeded its goals because of the generosity of the individuals and their organisations involved in the program.
- Program design and delivery: Where several Australian organisations/donors are involved with the same water utility or association, it would be beneficial for occasional meetings to be held together to discuss **collaboration** and support the international partner to coordinate assistance.

These insights from the program are responded to by way of reflections and recommendations in Section 10 of this report.

"It was so interesting to hear that the [Australian partner water utility] staff really support its customers by assisting them with applications for financial assistance from the state/government to pay off their outstanding bills."
- Pacific Water Utility Partner

"I believe that this is a good model especially if there is an ongoing relationship rather than a one-off program. This approach to build capacity rather than building physical infrastructure is very beneficial"

- Partner from Australian water utility

Figure 1. Partners inspecting a water treatment plant in Tasmania

Contents

1 Methods

This Monitoring, Evaluation and Learning (MEL) report has been informed by a range of qualitative and quantitative data collection processes and sources including as described in Figure 2:

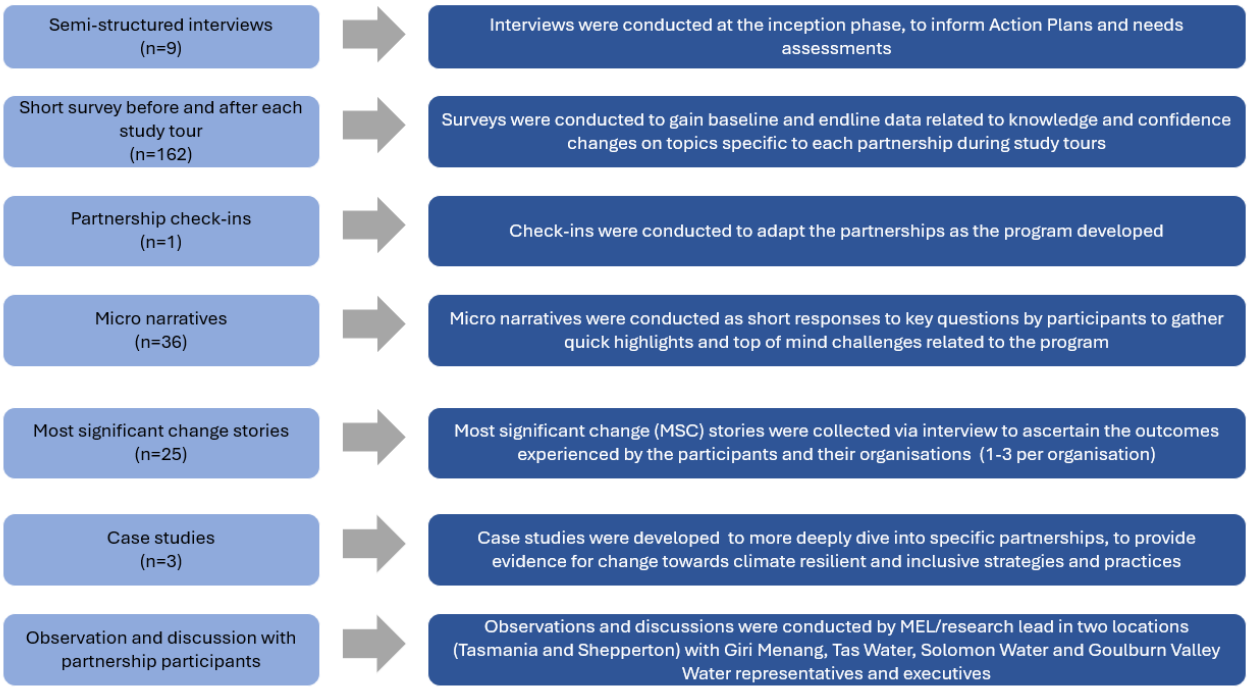

Figure 2. Data collection processes and sources

Table 1. Total number and composition of respondents to surveys and micronarrative check-in

	Number of respondents			
Survey	**Asia**	**Pacific**	**Australia**	**Total**
May 2023 (pre-study tour)	3	7	9	**19**
May 2023 (post-study tour)	2	5	8	**15**
Oct 2023 (pre-study tour)	18		18	**36**
Oct 2023 (post-study tour)	6	14	13	**33**
March 2024 (pre-study tour)	10	9	17	**36**
March 2024 (post-study tour)	6	6	11	**23**
Micronarratives	9	10	17	**36**
			TOTAL	**198**

Quantitative data was also collected in relation to:

- Number of people directly involved in the partnership activities from international utilities and associations (M/F/D)
- Number of Aus water utility staff involved in in the partnership activities (M/F/D)
- Number of AWA staff and network involved in the partnership activities (M/F/D)

- Number of people involved in learning webinars
- Number of people who read and access the articles related to the program on Source/AWA website and social media including LinkedIn, and time spent on pages.

All MEL processes were informed by the following six principles (MacArthur et al, 2022) to ensure that our approach would be tailored to the needs of program participants, and be respectful, relevant, right sized, and rigorous (Figure 3):

Principle	Definition
Transformative	Inspires positive change for participants and researchers through the process of the research Inspires positive change for programs and organisations from the outcomes of the research
Respectful	Protects human and legal rights and maintains the dignity of participants and stakeholders Proactively involves a diversity of participants and prioritises their satisfaction with the research process
Relevant	Generates and disseminates rich and useable insights Suitable for the cultural, geographic, and situational context
Right-sized	Adopts relevant, simple, and convenient tools and techniques Effectively and efficiently leverages time, money, and skillsets
Rigorous	Employs a systematic approach to sampling, collection, analysis, and interpretation Ensures well-founded, plausible, and justified insights, supported, and refined by existing evidence
Reflexive	Engages openly about assumptions and other complementary and conflicting perspectives Remains aware and honest about dynamics of power between the participants, researchers, and the broader stakeholders

Figure 3: Principles that guided this evaluation (MacArthur et al, 2022).

Figure 4. Partners from the PWWA and the Pacific

2 Theory of Change

The Theory of Change was co-created following consultation interviews and workshops with partner utilities and associations in Solomon Islands, Tonga, Vietnam, Samoa and Indonesia. The overarching 10-year goal of the program is to:

Improve health and wellbeing of people in the Asia-Pacific through delivery of inclusive, economically sustainable and climate resilient water and wastewater services.

Intermediate outcomes will be achieved after the one-year Pilot Program (2023-2024). End of program outcomes have a 3–5-year span as shown in Figure 1 should funding of the program be continued.

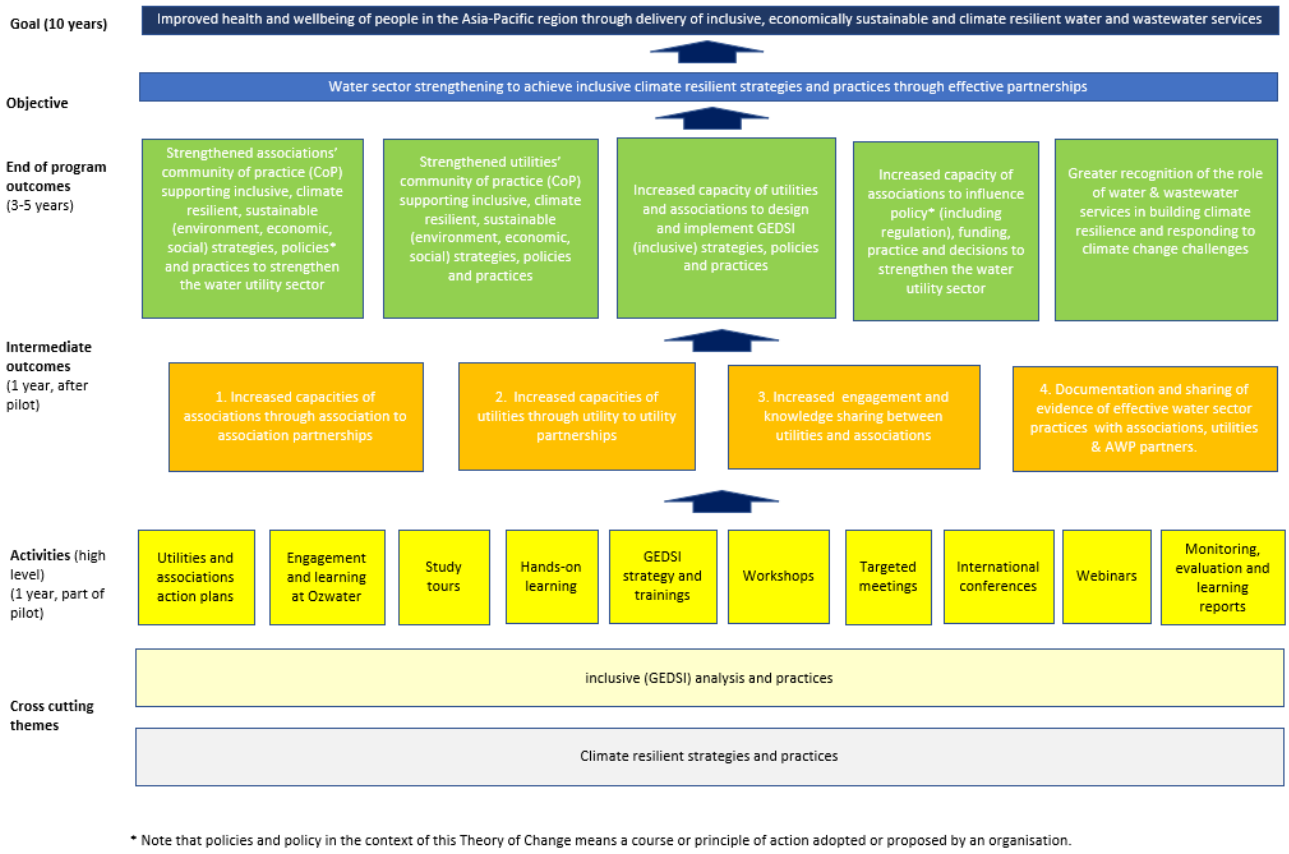

Figure 5 Theory of Change for the Partnership Program

This MEL report is structured around the **intermediate outcomes** as shown in Figure 5 in orange boxes:

We have incorporated intermediate outcome 4. *Documentation and sharing of effective practices with associations, utilities and AWP partners* within each of the other intermediate outcomes.

Box 1

Solomon Water has recently rolled out a new IT system with a range of integrated functions. As part of the study tour, participants examined the Goulburn Valley Water treatment plant IT systems. Over the week they had the opportunity to meet with a range of IT specialists working to make the water utility more efficient, to reduce water losses, improve billing and revenue and provide real time feedback about system functions. An outcome of the tour was that Solomon Water will be reviewing and improving its GIS and SCADA system, with the support of Goulburn Valley Water staff.

"The level of support from the [the partner utility] is excellent since they provide as much as possible information regarding the action plan and provide some insight to change management and efficiency with the operations teams"
- Asia-Pacific Water Utility Partner

2.1 AWA's role as a partnership facilitator

AWA International program profiles and positions the expertise and experience of its members and the wider Australian water sector to play a key role internationally. The International program is designed to facilitate and enhance global collaborations, ensuring that the knowledge and skills of Australian water professionals are effectively shared and utilised worldwide, supporting two-way learning.

As a facilitator, AWA conducts several key activities, including careful partner matching, logistics support, ensuring continuity in partnerships, facilitation, translation, communications, and providing technical and cultural knowledge. Well informed partner matching is essential for establishing new partnerships. AWA and its international association partners use their knowledge and connections to appropriately match utilities based on context, size, and areas of interest. This ensures that partnerships are well-aligned and mutually beneficial.

Logistics support is another vital activity, recognising that participants from each utility have demanding day jobs and often lack the time to organise meetings, book travel, and follow up on agreed content sharing. By handling these logistics, AWA enables participants to focus on the core learning and technical objectives of their partnerships.

AWA provides a range of learning and development opportunities for partners, notably through and around Ozwater conferences. The International program team facilitate delegations, make space for international representatives to speak on panels and provide support for strategic meetings and other linkages between international and Australian conference participants. All these opportunities help international delegates to make the most of Ozwater, and helps to facilitate influential partnerships and connections around mutual areas of interest and action.

There can be changes in utility representatives due to workloads, staff movements, and shifts in focus or priority areas however AWA provides continuity throughout the relationship. This stability ensures that partnerships remain productive and are aligned with their original goals. AWA also helps partnerships maintain focus amidst the breadth and complexity of the challenges they face. By using facilitation and planning tools, AWA prioritises and directs the partnership towards practical actions, ensuring that efforts are targeted and effective.

Strategic linkages are another vital component, with AWA ensuring connections are made to DFAT (and other funders) priorities and overarching issues for collaboration are identified by local water associations and other development partners. This alignment with broader strategic goals enhances the impact and relevance of the partnerships.

AWA team brings valuable technical and cultural knowledge, along with water industry experience, which they share with participants. This expertise supports the technical and cultural dimensions of international collaborations, enriching the partnership experience and providing added value to each unique partnership.

AWA team also works hard to deliver high-quality and timely communications, sharing program activities and outcomes with participants and the broader sector (see Annex 2 for further information on communications relevant to this program).

Without effective facilitation, AWA has found that partnerships may falter due to the complex inputs required to make them work optimally. AWA's support and facilitation aim to make partnerships a fulfilling opportunity for members, and most importantly, to achieve the water and wastewater goals that are the focus of the partnerships, resulting in more people having safely managed water and sanitation in the Asia Pacific region.

A highlight was "Relationship building with [our water utility partner] reps and the [local Association] through the week. Highlight as I believe any partnership such as this one is relationship based and it is about people working together." - Australian Water Utility Partner

3 Increased capacity of associations through association-to-association partnerships

Three partnerships were developed or continued as part of the Partnerships for a Resilient and Climate Smart Water Sector Program:

1) Pacific Water and Wastewater Association (PWWA) with Australian Water Association (AWA)

2) Vietnam Water Supply and Sewerage Association (VWSA) with Australian Water Association (AWA)

3) Indonesian Water Association (PERPAMSI) with Australian Water Association (AWA)

The Australian Water Association had existing relationships with the associations, so this phase of the activity built upon historical ties and trusted relationships.

Figure 6. Uniting water leaders across our region. Associations panel session at Ozwater'24

3.1 Activities delivered

The following activities were delivered between October 2022 – May 2024 both online, and in person.

Table 2: Activities were delivered between October 2022 – May 2024 as part of the partnership program

Activity	Key activities conducted between AWA and associations
Associations action plans specifying learning/capacity development needs	• Three action plans were developed in consultation with the three associations – VWSA, PWWA and PERPAMSI. In-country visits included meeting with all three associations to ensure the action plans were well targeted to the needs of the partners and matched well with the skills and expertise of AWA.

Hands-on learning (study tours)	• In January 2024, VWSA attended and actively participated in GEDSI training in both Phu Tho and Can Tho in Vietnam. VWSA also attended and actively contributed to the online GEDSI follow up session held on 5 April 2024 where participants shared how they are implementing in their organisation lessons learned from the in-person training.
Workshops and webinars (October 2023- February 2024)	• On 12 October 2023, an online Community of Practice workshop was organised and attended by more than 20 participants from AWA, PWWA, PERPAMSI and VWSA. • Participants included CEO/Director/Chairman and other senior leaders from each of the associations. The workshop began with context setting and introductions from each association where information around organisational scale, structure, and history along with the services they provide was discussed. • On 28 September 2023, AWA facilitated an online workshop focusing on communications needs analysis for PWWA. • On 5 December 2023 a workshop responding to communications support requests from PWWA was organised. The workshop focussed on communications strategy development processes and planning and implementation for major events. Following this, AWA continued to support PWWA communications and advocacy planning. • On 24 January 2024, members from AWA events team shared insights and processes with PWWA staff. The content shared included strategies to increase revenue, particularly focused on the PWWA conference. These strategies have been incorporated by PWWA in their proposals to their Board and planning for their 2025 PWWA conference. • On 24 January 2024, AWA and VWSA organized an online workshop focusing on member database and communications. AWA International, member and communications team members attended VWSA's presentation on their current status and strategic objectives in these areas particularly in relation to improved data collection and advocacy concerning national water policies and regulation. • On 31 January 2024, in a follow up online workshop AWA team shared knowledge and experiences with VWSA team on the development of tools and approaches for improved member communication database management. A technology requirement brief was prepared by AWA to assist VWSA in identifying appropriate IT solutions to match their current capacity and longer-term strategic member management, communications, and advocacy objectives. • On 21 February 2024, AWA and VWSA organised an online workshop where AWA team shared information about the GEDSI practices and YWPs activities that are implemented by AWA and are being practiced more broadly by AWA members across the Australian water sector. • Webinars between AWA, PWWA and PERPAMSI on data, members and advocacy were organised in March 2024, during which AWA presented on three separate case studies. The case studies showcased member-driven initiatives including a submission to the Productivity Commission on the National Water Initiative, the running of Specialist Technical Networks and the development of an Outbound Trade program. AWA shared the approaches taken to collect the data and views of members

	and develop these into advocacy positions, communities of practice and programs.
Targeted meetings	• AWA and PWWA held frequent meetings throughout the course of the project to ensure effective implementation. • AWA attended PWWA conference in 2023 where targeted meetings were facilitated by AWA between PWWA, DFAT, ADB, Beca Hunter H20, and other Pacific utility partners. • AWA held targeted meetings with PERPAMSI in November 2023 and January 2024, prior to and after study tours. Meetings were followed up with actions (including with PERPAMSI's members Giri Menang and Tirta Musi) and priorities in the PERPAMSI – AWA Action Plan on the agenda. • AWA facilitated both online and face-to-face meetings with VWSA to discuss and monitor the progress and plan for implementation of priorities between AWA and VWSA (check-in, interviews, etc.,). • Meeting between senior executives from PERPAMSI and AWA at the World Water Forum in Bali in May 2024.
Engagement at Ozwater	• All three partner associations participated in an impactful and popular panel session at Ozwater 2023 in Sydney where they discussed the importance of international partnerships for climate resilience in the water sector. • At Ozwater in 2023 all association members took part in a panel (Figure 2) as part of AWPs International Stream at the conference. • In 2024, all three partner organisations once again attended Ozwater (Melbourne) and participated in an all-partner program review and planning workshop with their member utilities and a 'Uniting Water Leaders Across Our Region' panel as part of the International Development Program session (Figure 1).
Engagement and learning at international conferences	• In August 2023, AWA travelled to the PWWA conference in Palau to support Tongan and Solomon Island partners to present and engage with the PWWA during the conference. • In September 2023, AWA team, including the CEO, Head of International & Industry Programs, and Vietnam Country Lead attended Vietnam Water Week 2023. The event was organised by VWSA. AWA CEO Corinne Cheeseman presented Australia water sector's experience and knowledge on the topic of response and recovery in the face of extreme weather events. • In May 2024 AWA CEO Corinne Cheeseman attended the World Water Forum in Bali to present on a panel and used this opportunity to meet with representatives from PERPAMSI and PWWA.

For information related to association and utiility connections and partnerships being developed and enhanced through the program, please see Section 5 below on outcome area #3.

Figure 7. Senior leadership of VWSA, PERPAMSI, AWA, PWWA, and the Cambodian Water and Wastewater Association (CWA) discussing the importance of international partnerships for climate resilience in the water sector on a dedicated panel at Ozwater'23 in Sydney.

3.2 Outcomes from association-to-association partnerships

The following section provides evidence of the outcomes from the partnerships AWA facilitated with the three international associations.

3.2.1 AWA and PERPAMSI Partnership

The Action Plan for the partnership between AWA and PERPAMSI was focussed on building PERPAMI's business resilience by attracting and maintaining members. Activities identified to achieve this included:

1. Learning how to increase member value
2. Supporting PERPAMSI's capacity to make representations to decision makers by collating water sector insights
3. Supporting PERPAMSI to communicate insights effectively with their members
4. Working with members - Giri Menang and Tirta Musi – to share their learnings from the partnership program with others in the water sector in Indonesia

Dedicated time was spent during the outbound study tours to Lombok and Palembang on strengthening the relationship between PERPAMSI, Giri Menang and Tirta Musi, and PERPAMSI and AWA. This was achieved by having PERPAMSI representatives actively participate in the tours, and focused discussions in Lombok and Palembang (all), Jakarta (AWA and PERPAMSI) and online (throughout the program).

On 12 October 2023, AWA, PERPAMSI, PWWA and VWSA participated in a combined associations workshop on (increasing) member value, originally planned for AWA and PERPAMSI only. Three case studies were presented and discussed in detail during this workshop, to demonstrate different ways to engage and represent members, and improve their experience.

AWA and PERPAMSI have strongly supported the sharing of newly acquired knowledge and experience with and among members in Australia and Indonesia respectively. This is also a requirement from PERPMASI of members involved in such partnerships, which they refer to as "domestic twinning" or "Water Utility Solidarity Partnerships". The approach sees mentor and mentee water utilities (PDAMs) coming together online and in person. The process is focused on building capacity, encouraging better performance and adopting best practices.

Giri Menang has been a mentor since 2023 for four water utilities from East Nusa Tenggara. More recently, this has been extended to an additional four utilities:

- Kupang Water Utility – Kupang City
- Tirta Kelimutu Water Utility – Ende Regency
- Tirta Nusa Ina Water Utility - Central Maluku Regency
- Tirta Yapono Water Utility – Ambon City
- Ina Gelekat Water Utility
- Timor Tengah Selatan Water Utility
- Tirta Cendana Water Utility - Timor Tengah Utara Regency
- Tirta Komodo Water Utility – Manggarai Regency

3.2.2 AWA and PWWA Partnership

AWA/PWWA Action Plan prioritised three areas of capacity building to ensure the growth and sustainability of PWWA, and strengthen its ability to provide a voice for the water sector across the region.

1. Enhancing communications for impact
2. Supporting knowledge exchange
3. Increasing member value

On 28 September AWA facilitated an online workshop focusing on a communication needs analysis. This was followed up on 5 December with a workshop responding to communications support requests from PWWA looking at communications strategy development processes and planning and implementation for major events. These workshops were followed up with discussions between PWWA and AWA, including with PWWA's new communications lead, as they worked with their board to develop their communications and advocacy strategy.

In late August 2023, an AWA representative travelled to the PWWA conference in Palau to support program participants from Solomon Water and Tonga Water Board to participate in the conference and to support knowledge exchange with PWWA members. This was the first presentation in an ongoing communications campaign to share knowledge gained through the Program with the wider Pacific water community. Additionally, PWWA and their participating members shared stories about the program in their newsletters, websites, through social media, as well as through presentations at Ozwater'23 and Ozwater'24.

PWWA participated in the combined associations workshop in October 2023, led by AWA. A follow up workshop and discussions were held in February 2024, focusing on sustainable event revenue. This workshop was designed in collaboration with AWA events team to share strategies with PWWA for financially viable major events that result in increased member engagement and value.

3.2.3 AWA and VWSA Partnership

Results from the discussions at the scoping meetings organized in Phase 1 of the Program indicated that VWSA, with the role of the peak body of the water sector in Vietnam, aspired to represent the views and interests of its members, and to advocate a sustainable water future in Vietnam. VWSA understands that efficient and effective communication with its members is crucial for engaging with its members, and collection of its members' comments on draft of legislative documents, especially while the Vietnamese government is developing the Law on Water Supply and Sewerage and calling for comments from Vietnam water utilities on the draft of this Law. In addition to this, VWSA also realizes that effective management of members' database is key to help VWSA has an up-to-date overview on status of Vietnam water sector that can greatly contribute to the planning works for the future development of Vietnam water sector. Therefore, pivoting to digital management from manual management of members database is essential. Another equally

important role of VWSA is that advocating for a sustainable water future in Vietnam and supporting its members to attract and retain YWPs and promoting GEDSI practices in the sector are critical.

Based on the results of the scoping discussions, the Action Plan for the partnership between AWA and VWSA was developed, focusing on three priorities including improving VWSA's capacity to communicate with its members more efficiently and effectively and digitally transform its member database management system and supporting VWSA to promote GEDSI activities in Vietnam. The third priority is to support Can Tho Wassco and Hoa Binh WSC sharing their learnings from the partnership program with others in the Vietnam water sector.

1. Enhancing VWSA's capacity in member communications with development of member database and communication system.
2. Enhancing VWSA's capacity in development of GEDSI programs including Women in Water and Vietnam YWP network.
3. Creating opportunities and providing the platforms for Can Tho Wassco and Hoa Binh Clean Water Company to share their learnings on climate smart and resilient water management from their partnerships with Urban Utilities and Cassowary Coast Regional Council with the wider water sector.

With regards to the priority 1, AWA organized an Online Workshop in October 2023 to share with VWSA about the operation models of AWA. The Chairman, Vice-Chairwoman and other senior VWSA members who attended the online workshop and found the topics interesting and were inspired to adopt some of AWA practices in their plans. Based on the Technology Requirement Brief that AWA has provided, VWSA has developed their plans and started exploring IT suppliers and its members to help with the development of a digital tool that has functions VWSA needs.

The water sector in Vietnam, like that in Australia, is currently facing human resource challenges, as a response to which, VWSA plans to advocate for empowerment of female leaders and YWPs and emerging leaders to support their members in this area. AWA and VWSA agreed to discuss in further detail on how AWA can promote GEDSI within the water sector in Australia. VWSA participated in the GEDSI training that was delivered by a local expert in Vietnam in early 2024.

VWSA representatives joined the visit by Cassowary Coast Regional Council to Hoa Binh WSC and as a result were able to strengthen their relationship with the water utility and see the partnership in practice. VWSA were planning to organise a webinar for their members to hear from Hoa Binh WSC and Can Tho Wassco and were exploring other opportunities to encourage experience from the partnerships with the wider Vietnam water sector.

3.2.4 Cross-association learning and development

An online workshop was held on 12 October 2023 with more than 20 attendees from AWA, PWWA, PERPAMSI and VWSA. This included the CEO/Director/Chairman and other senior leaders from each of the associations. The workshop started with context setting and introductions with each association sharing information about their organisational history, structure and services they provide.

AWA's Senior Leadership Team (including CEO) and subject matter experts then presented on the following topic areas, which were identified as common themes across the three Action Plans:

- Member Value & Business Resilience
- Knowledge Exchange Practices
- Communications for Impact & Member Insights

There was strong engagement, contributions, and insights from the senior representatives of all three associations. All slides and a recording of the workshop were shared with participants post workshop. Verbal feedback from participants indicated that they found the content useful with particular areas of interest being pursued in further detail through each of their Action Plans.

"There is no boundary to doing what is right and best"

"There is a Samoan saying, *"E leai se tuaoi o mea lelei"*. Translated it says *"There is no boundary to doing what is right and best"* for the collective good of your family.

Water has no boundaries, climate change impacts all of us and if it feels right and best to act collectively, what is stopping us? We have the same goals and desire the same outcomes. We need Associations like AWA and PWWA because they bring together diverse experiences of members that share knowledge and are willing to engage in water. Through them and with you as development partners, you are able to have the widest and most direct impact in your development work. The partnerships PWWA and AWP have had over the past seven years catalysed change in the water sphere in the Pacific; it has helped build the capacity of our people, it has built networks and lasting relationships of people mutually helping each other; don't change what has worked, instead look at how you can better support Associations to work better towards our collective responsibility for our extended family in this region."

- Lusia Sefo-Leau, PWWA CEO speaking on the associations panel at the Ozwater 2024 conference in Melbourne

3.3 Documentation and sharing of evidence

4. Documentation and sharing of evidence of effective water sector practices with associations, utilities & AWP partners.

For a detailed accounting of key evidence related to each outcome area, see Annex 2.

1. **Building Capacity in the Asia-Pacific**
   https://www.awa.asn.au/resources/latest-news/building-capacity-in-the-asia-pacific
2. **Partnerships for a resilient and climate smart water sector**
   https://www.awa.asn.au/resources/latest-news/partnerships-for-a-resilient-and-climate-smart-water-sector-international
3. **Water association partnerships accelerate shift to climate smart and resilient water sectors in the Asia-Pacific**
   https://www.awa.asn.au/resources/latest-news/water-association-partnerships-accelerate-shift-to-climate-smart-and-resilient-water-sectors-in-the-asia-pacific
4. **Empowering Diversity: Inclusion Training in Vietnam's Water Utilities**
   https://www.awa.asn.au/resources/latest-news/empowering-diversity-inclusion-training-in-vietnams-water-utilities
5. **Partnerships that work: Australian and Pacific water utilities find common ground building climate resilience**
   https://www.awa.asn.au/resources/latest-news/partnerships-that-work-australian-and-pacific-water-utilities-find-common-ground-building-climate-resilience
6. **Australian regional water sector strengthens ties with Vietnamese partners in 50th year of cooperation**
   https://www.awa.asn.au/resources/latest-news/australian-regional-water-sector-strengthens-ties-with-vietnamese-partners-in-50th-year-of-cooperation
7. **TasWater and Giri Menang (Indonesia): building more resilient and climate smart water utilities**
   https://www.awa.asn.au/resources/latest-news/awa-taswater-giri-menang
8. **Uniting for Climate-Resilient Water Solutions Across Our Region**
   https://www.awa.asn.au/resources/latest-news/uniting-for-climate-resilient-water-solutions-across-our-region

9. **Ambassador to Vietnam supports knowledge exchange for clean water in Phu Tho Province**
https://www.awa.asn.au/resources/latest-news/ambassador-to-vietnam-supports-knowledge-exchange-for-clean-water-in-phu-tho-province
10. **Partnering for water resilience: Coliban Water and Phu Tho Water Supply Company**
https://www.awa.asn.au/resources/latest-news/partnering-for-water-resilience-coliban-water-and-phu-tho-water-supply-company

Overall statistics

- 2,435 total page views across the nine articles on AWA website
- 3 minutes average spend across each website page
- 107 social media posts total (across LinkedIn, Facebook, Instagram, Twitter, TikTok)
- 107,841 impressions
- 3,445 engagements (Likes, Comments, Shares, Retweets, Reposts)
- 1,026 link clicks

11. **Hero Video**
https://www.youtube.com/watch?v=V76rLn0KZNI

	Impressions	Video Views
YouTube	36,4422	42,951
LinkedIn	3,770	3,558
Facebook	2,338	665
Instagram	1,536	1,536
TikTok	61,920	61,920
TOTAL	**433,986**	**110,630**

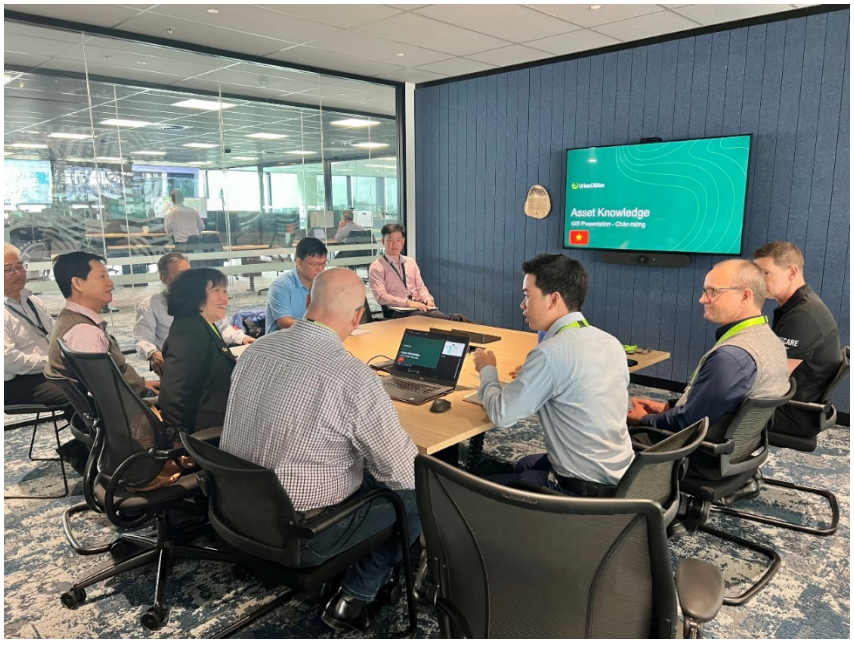

Figure 8. Partners meeting in Brisbane, Queensland

2. Increased capacities of utilities through utility-to-utility partnerships

4 Increased capacity of utilities through utility-to-utility partnerships

Partnerships involved in the utility-to-utility partnerships included:

- Hoa Binh Clean Water Company and Cassowary Coast Regional Council
- Can Tho Water Supply and Sewerage Company (WASSCO) and Urban Utilities
- Phu Tho Water Supply Company (Phu Tho WSC) and Coliban Water (in extension)
- An Giang PCERWASS and Riverina Water (in extension)
- PT. Air Minum Giri Menang (Lombok) and TasWater
- Tirta Musi Palembang City and Yarra Valley Water
- Tonga Water Board and Unitywater
- Solomon Water and Goulburn Valley Water

4.1 Activities delivered

Table 3: Activities delivered

Activity	Key activities conducted between utilities
Utility action plans specifying learning/capacity development needs	Eight action plans were co-created with partner utilities in four countries – Vietnam, Indonesia, Solomon Islands and Tonga.
Hands-on learning (study tours)	28 Study tours (inbound and outbound) were conducted involving 91 people from the Pacific (M-63, F-28), 262 people from Asia (M-182, F-80), and 289 people from Australia (M-186, F-93).
Workshops	Partner utilities held numerous workshops on risk management, incident management, non-revenue water, IT systems, family violence policies and customer support, and water treatment plant management.
Targeted meetings	Partners met directly regularly over the course of the partnership, often via zoom and WhatsApp (or similar) fuelled by friendship and a strong collegial understanding.
Engagement at Ozwater	Representatives from all partnership organisations were present at the Ozwater'23 and Ozwter'24, contributing in a range of ways including panel presentations, meetings with partners, and study tours either side of the conference.
Engagement and learning at international conferences	Tonga Water Board and Solomon Water co-presented with AWA at the 2023 PWWA Conference in Palau, sharing learnings and early outcomes of their partnerships.

Figure 9. International session at Oz Water 2023, sponsored by AWP

Case Study: Sustaining Partnerships for Improved Water Service Delivery

The partnership between Coliban Water in Australia and Phu Tho Water Supply Company (WSC) in Vietnam commenced in 2017 with funding from the AWP and AWA and was extended in 2023 due to its success and demonstrated mutual benefit. Despite facing challenges like the COVID-19 pandemic, the program persisted, demonstrating its longevity and resilience.

A key factor in the success of the partnership was the establishment of a clear vision and a genuine, trust-based relationship between the organisations. Coliban Water's role as a mentor emphasised the importance of collaboration and knowledge exchange rather than imposing directives. As noted by Coliban Water: *"we have always sought their advice on what they want to know, and then tailored each visit around their requests and areas of interest, and chosen staff to go who have expertise in those areas of interest".* Social interactions and shared meals further strengthened the bond between the partners.

The partnership resulted in tangible improvements, particularly at Phu Tho's water treatment plants, where advice from Coliban Water was seen to be implemented. Despite differences in governance and decision-making speed, both organisations learned from each other and adapted accordingly. In one instance, the presence of a tree growing out of a water storage tank was removed and the tank replaced after advice from Coliban Water. This action led to reduction in contamination risk and potential water loss from the system.

One of the significant achievements that Phu Tho WSC and Coliban Water have achieved since the beginning of the partnership program was that Phu Tho WSC successfully upgraded and automated the operation of two water treatment plants (Viet Tri and Phong Chau WTPs) based on the performance review and recommendations accomplished with support of Coliban Water.

Additionally, recommendations for standardisation in hardware and information presentation were implemented, leading to observed improvements in Phu Tho's systems. Coliban Water has offered advice

around principles and processes related to procurement, leading to Phu Tho selecting locally relevant and reliable suppliers which has been a key outcome from the collaboration.

Australian staff participating in the program felt motivated by the opportunity to contribute to providing clean water as a service to people who are not as fortunate as those who can rely on safely managed tap water. The program also served as a valuable staff development opportunity, pushing individuals out of their comfort zones, and enhancing their leadership capabilities.

Consistent coordination and having a focal person were recognised as essential for effective communication and progress in the partnership. Over the years, ~20 staff from Coliban Water have participated in the program, and 55 people from Phu Tho WSC. Having a champion in each organisation, committed for the long term, was deemed necessary for sustained success.

The partnership's success can be attributed to its focus on meeting the needs identified by Phu Tho WSC and the active involvement of all participants, ensuring that each visit and interaction added value to the collaboration. This commitment to mutual benefit and active participation underscores the importance of trust and relationship building in achieving shared goals in water management improvement initiatives.

4.2 Outcomes from utility-to-utility partnerships

The utility-utility partnership program provided participating utilities with opportunities to create change within their organisations across a range of technical domains, and in terms of organisational culture change. These outcomes were achieved through a series of learning goals established at the program's commencement. Participants gained insights and exchanged knowledge through various activities and in-person interactions as described in the table above. Surveys highlighted a deeper involvement of utilities in both technical and non-technical areas of mutual interest, such as water treatment processes, pressure management, non-revenue water reduction, water quality improvement, customer engagement, and climate change. Feedback following the study tours indicated that the insights gained through these engagements have enhanced their capabilities to create long-lasting and systemic change.

Surveys conducted before and after the study tours noted that there were a range of topics of mutual interests, which served as learnings for all participants. Some of these insights were also implemented by the utilities during the partnership program itself. It was observed that the program led to outcome changes in a number of areas including: Climate change action, Learning/knowledge, new technology, new processes, GEDSI, policy, practice, leadership, confidence, career development, and customers/community engagement.

Most significant change stories revealed that the biggest changes that participating organisations experienced in relation to doing something new or different were related to:

1. **New processes** to improve efficiency, water quality, reduce leakage, and improve worker safety.
2. **New technologies** to manage water losses, automate systems, and provide better oversight and feedback on the water scheme.
3. **Learning** and knowledge on a range of topics from incident management to smart metering and billing processes and gender-based violence policies
4. **Climate change action** across a range of issues including managing saltwater intrusion, reducing water losses, and improving early warning systems.

Other changes noted related to new practices and policies, greater awareness of GEDSI, increased confidence, leadership and career development and customer and community engagement. These domains of change are further discussed below.

Overall, the program demonstrably improved water management practices across participating utilities. From reducing water waste and leakage (NRW) to fostering a safety-conscious culture and building technical expertise through knowledge sharing, the program equipped participants with tools and resources to deliver better water and wastewater services in their contexts.

Cross-cutting sub-themes reported by participants included organisational policy changes, process upgrades and learning best practices around water management and business approaches. Emerging topics that were discussed throughout the tours and formed key areas of learning interests for utilities are discussed in the sections below drawing on information provided in surveys and most significant change stories.

The outcomes will now be further described with reference from most significant change stories, and surveys completed by participants, and have been organised in the three key areas identified in the Australian Water Partnership reporting template: (1) improved water planning; (2) water allocation and (3) governance.

4.3 Improved water planning

4.3.1 Climate change awareness and risk resilience outcomes

Most significant changes reported included:

- Co-design of climate resilient technical solutions to address saltwater intrusion into surface water source.
- Learning about strategies to address climate change especially with respect to managing leakage (NRW) which diminishes supply and puts pressure on the organisation financially.

Findings from the surveys demonstrated that the participants gained in-depth insights on a range of climate change issues and possible solutions to mitigate climate change impacts. Pacific and Asian utilities were particularly inclined to gain knowledge on various risk mitigation and disaster preparedness approaches that they can implement within their regions. Australian and Pacific utilities collectively realised the importance of collaboration and teamwork in addressing climate change issues. All utilities were inclined to develop a robust understanding on climate related risks and advance their knowledge on resilience and risk planning approaches as a result.

"Very positive. Win-win situation. Positive impact on climate change issues which we know will become more and more prominent. Grateful to be able to put my skills to good use in an international context. Our partners are now also helping other authorities in their country, so the program has a 'ripple' effect which is great" - Partner from Australian water utility

One of the main issues reported by the utilities was the impact of unforeseen climate events on their operations and maintenance. They expressed a keen interest in improving their preparedness for such events. Specifically, a Pacific water utility raised concerns about increased salinity and the associated risks. These participants were eager to learn about risk mitigation approaches to address their ongoing salinity issues. They also gained valuable insights from the Climate Resilience Project supported by their Australian partner utility.

Climate change can cause direct as well as indirect impacts. One such indirect impact that was discussed by participants was the increasing economic burden on customers due to changing climate. Scope and scale of these issues were discussed in depth during the study tours. Pacific utilities were particularly concerned about the direct impacts of climate change on future water supply. Knowledge gained from topics like disaster risk reduction, preparedness strategies and resilience planning from the study tours provided utilities with more confidence to deal with the issues.

"Realising that the knowledge I've gained working in the water industry is of immense value to the Water Board to help them manage their critical assets, as well as plan, respond and recover to the impacts of climate change and other natural disasters. Experiencing a Pacific Island culture was also immensely interesting and rewarding." - Partner from Australian water utility

"I will put all the new things I learned from this program to work on solutions when we are planning and building the future" - Partner from Asian water utility

4.3.2 Learning / knowledge outcomes

Most significant changes reported included:

- Learning about smart water meters technology and reading.
- IT system plans have been directly informed and influenced by study tour and engagement.
- Technical support and assistance with mapping water and sewerage systems.
- Learning on communications and marketing strategies, revenue generation, and conference planning.
- Adapted Certificate 4 level training and implementation by partners (for managing work sites and improving professionalisation)
- Non-Revenue Water Management: Australian partners assisted their partners in improving non-revenue water management. This involved sharing fundamental concepts and supporting the implementation of effective practices across the entire utility, especially around pressure management and monitoring.
- Climate Resilience: Partnerships provided valuable insights into addressing climate challenges. One utility learned about mitigating saltwater intrusion and managing heavy rainfall's impact while another has developed a water source risk assessment to better respond to the fluctuations in water quality that occur during extreme weather events.
- Customer Service Enhancement: Sharing best practices in customer engagement led to improvements. One utility implemented internal procedures to better support their customers, while another learned from discussions on building customer relationships and financial hardship programs.

As shown above, the learning and knowledge development outcomes were significant and ranged from learning about smart water meters technology and reading practices, to IT system plans and technical support and assistance with mapping water and sewerage systems.

"I learned a lot of new things, before I thought everything was perfect but now I realise there is more to do/learn. I have learned about smart water meters and how to read meters." – Pacific Interviewee

One interviewee noted the effectiveness of the timing of the study tour in that they were in the process of upgrading their systems so the learnings they obtained could be directly applied to the IT systems under development: *"The changes we will implement will be immediate as we are going out to tender so our new knowledge will be incorporated in the tender process and specifications".*

In one case, the training initiative which adapted Australian Certificate 4 level training to a local context yielded positive results, with participants from the Pacific going on to conduct similar training on outer islands with more staff. This development was viewed as a satisfying outcome of the partnership, demonstrating the transfer of skills. Australian partners offered that open communication channels facilitated ongoing support and collaboration between the partnered utilities.

"We will use this knowledge to devise appropriate methods for dealing with emergencies. We will improve the existing SOP to make them more effective." - Asia-Pacific Utility Partner

4.3.3 Process and Practice Outcomes

Most significant changes reported included:

- Risk management sessions developed and implemented.
- Standardising protocols for NRW reduction; non-revenue water reductions due to pressure management and metering and checking leaks during the night; Reduction in non-revenue water in pilot district for example from 29% to 15% through various initiatives such as pipe rehabilitation and pressure management.
- Significant operational improvements, especially in automation systems for water treatment plants.
- Strategies and policies related to making the organisation more customer focussed.

Data gathered from the study tours revealed that although utilities had established practices within their organisations on various operational and asset management aspects, study tours gave them a new perspective and an opportunity to observe and learn about practices implemented by their partner utilities in areas of mutual interest. Inter-utility interactions during tours resulted in knowledge exchange around best practices on range of topics including NRW management, demand forecasting, water quality management, community engagement and asset management along with the challenges and opportunities associated with them. Asian partners were particularly interested in adopting the best practices from Australian utilities around freshwater management alongside wastewater. The risk-based practices adopted by Australian water utilities to forecast and manage future demand impacts on their treatment plants and networks was a key learning outcome for Asian utilities. Similarly, safety protocols and practices adopted by Australian utilities around working with Asbestos and Chlorine was another key takeaway for Pacific partners.

Other common learnings included operational practices implemented at water and wastewater treatment plants. Participants learnt that there is a huge scope for improvement within their organisations in this area. Pacific and Asian utilities also gained insights into how Australian utilities manage and plan for asset repairs and replacements at treatment plants and across networks. For Australian utilities study tours offered them an opportunity to understand how climate change can impact the water sector at large and the emerging need to adopt best practices to manage climate change impacts on water networks.

Participants also discussed opportunities to improve current routines and schedules for field employees and explored ways to enhance current practices. Other practices involving incident reporting and reviewing construction and maintenance codes and standards for improved water loss, customer service and water quality outcomes were also discussed in depth.

"This study tour offered identification of loopholes & issues and how to execute those issues."
- Partner from Pacific water utility

"The study tour gave me a good chance to understand about 0&M activities in Australia as well as the strict regulations on controlling water quality, water service and protect the water resources. Besides, creating a friendly and comfortable working environment is also play an important role to achieve working efficiency"
- Partner from Asian water utility

Figure 10. Giri Menang water utility and TasWater in learning sessions together

"Very positive. Win-win situation. Positive impact on climate change issues which we know will become more and more prominent. Grateful to be able to put my skills to good use in an international context. Our partners are now also helping other authorities in their country, so the program has a 'ripple' effect which is great"
- Partner from Australian water utility

"I believe that this is a good model especially if there is an ongoing relationship rather than a one-off program. This approach to build capacity rather than building physical infrastructure is very beneficial"
- Partner from Australian water utility

Figure 11.: On the job training in Vietnam

4.3.4 Process outcomes

Data gathered from the study tours revealed that all utilities gained insights on various challenges and similarities involved with managing processes, people, systems, and tools across various areas. Pacific utilities were keen to know more about processes around water treatment plant operations, whereas Asian utilities benefited from learning from one of the Australian Utility's approaches to manage leakage by ensuring appropriate placement of main pipe network. Likewise, an Australian utility was able to begin to problem solve some of the challenges faced by one of the Pacific utilities around managing processes related to debt and missed bills issues arising due to financial hardships.

Australian and Pacific utilities particularly reported their learnings about the processes used to develop and maintain asset registers and its use in the procurement processes. Other areas of learnings included learning about ways to support Pacific water utilities' 'meter to cash process', types of meters used (such as smart meter), or and IT systems used to support these technologies and better manage non-revenue water. Pacific utilities were pleased to learn about one of the Australian utility's technologies implemented to improve service deliveries processes and job efficiencies. The study tour interactions also triggered self-reflection within the participants encouraging them to think a bit more on the current planning processes from a strategic point of view and ways to enhance them. Using insights gained from the study tour, participants also realised the need to review their internal SOP's and existing emergency frameworks and processes.

"This is a great opportunity that we can leapfrog any development in [our water utility] because we can learn from [our Australian partner's] successes and apply it on our scale."
- Partner from Pacific water utility

4.4 Improved water allocation

4.4.1 Technology and new systems outcomes

Most significant changes reported included:

- SCADA System Development: Participants successfully developed their own SCADA system, inspired by their Australian partner's model. Daily monitoring through this system allows for prompt leak detection. The Australian partner checked the bespoke model developed by their partner, demonstrating practical hands-on learning and implementation of learnings.
- Improved GIS Mapping of infrastructure: Learning from a partner's experience, one utility recognised the importance of accurate mapping systems and ongoing infrastructure maintenance based on this improved mapping.
- Application of advice on screens for automation; hardware solutions; water treatment and water storage hardware to reduce non-revenue water.
- Learning about early warning systems to manage climate change impacts.

Participants engaged in discussions about technology and its use in different operational and non-operational areas within their organisations. During the study tours, participants realised that there is a need to either review existing technology or assess the need to upgrade traditional systems with new technology. Asian and Pacific utilities were keen to gain more insights on technology implemented by their partner water utilities in managing their treatment plants. They were also keen to understand water allocation technology that can be used to improve service deliveries and job efficiencies.

Study tours encouraged participants to think about technology in new and different ways to improve their current systems. From an application perspective, a key takeaway for Asian utilities was the use of Geographic Information System (GIS) and drones for conducting surveys and managing pressure. Similarly, using SCADA systems and communication technologies to improve water quality and network monitoring and treatment plant operation was something the Asian and Pacific utility partners were interested in implementing.

"This twinning program is an excellent platform where information and technical know-how is shared, and problems are addressed. It is an amazing platform, and it should be continued especially for utilities in the Pacific".
- Partner from Asian water utility

"It is extremely rewarding working with likeminded teams striving to improve the supply of safe drinking water to communities and the related long-term health benefits these improvements bestow."
- Partner from Australian water utility

"Definitely applying these new learnings to my role as the IT Coordinator [at my water utility]. I look after IT and GIS and therefore applying these new learnings in terms of IT systems, GIS and SCADA will be huge for [our water utility]"
- Partner from Pacific water utility

Figure 12. Technology demonstrations and site visits were a key part of the program (pictured: PERPAMSI, Giri Menang and TasWater)

4.4.2 Customer engagement pathways outcomes

Customer satisfaction and delivering good customer service formed a core topic of discussion amongst all the participants. Learning about various customer metering and billing processes and focusing on different types of applications and technology that can be used to improve these processes emerged as a key topic of interest to utilities. Utilities learnt about ways and means of improving customer relationships through the development of a customer centric culture and adapting business and organisational process to support it. Participants also discussed various technological improvement strategies to enhance customer service delivery experience and improve customer satisfaction as a result.

Asian utilities were particularly benefited from learning about customer data segmentation that they can implement within their organisation. They were also keen on applying knowledge they gained from the tour to

promote organisational policies and programs directly to the customer. Asian and Pacific utilities reported that the key takeaway for them in this area was around improving communication and public relations with their customers. Focusing on strategies to engage with customers on bill payments was also reported to be of great value to Pacific utilities.

"I learned about the partnership program and the way it benefits both [the Australian water utility] and [the Pacific water utility]. This partnership program is best fit for capacity building, sharing of experiences and exchanging of ideas"
- Partner from Pacific water utility

4.5 Improved Governance

4.5.1 Policy outcomes

Most significant changes reported included:

- Prioritising Safety: A partner's emphasis on safety culture inspired a re-evaluation of safety practices within the international partner's utility. The program highlighted the importance of safety as an integral part of the work process, aiming to minimise injuries. Implementing visual reminders and promoting a culture of accountability.
- Gender-based violence and family hardship policy sharing and support and new policy formation.

Study tours and direct learning interactions between utilities provided participants with valuable opportunities to explore water sector policies and policy change by partner utilities. The study tours provided partners with direct opportunities to understand the policies of their partner, and also to ask questions about how it is implemented (for example, incident response policies, worker safety policies). Climate change preparedness and building climate resilience through risk mitigation were key areas of common interest among all utilities.

Pacific and Asian utilities demonstrated enthusiasm for understanding future climate change impacts on water reliability and supply. They discussed the necessity for stronger policies regarding water supply management and water losses to alleviate the economic burden on customers due to climate change and also in low-income contexts. The importance of maintenance as a resilience action and the essential role that resilient facilities play in mitigating climate change impacts were emphasised. Other policy topics of interest included water quality control, water loss management, and infrastructure planning and design. Given the interdependencies within the broader water sector, robust, integrated policies are essential for developing resilience in utilities, though they take time to develop.

Utilities expressed a strong desire to apply lessons learned from the tours to review and implement policy changes within their organisations. Recognising that policy changes involve complex processes related to policy, politics, and high-level decision-making, the partnership program's theory of change acknowledges the time required for development and implementation. It is clear that further investment is needed to support partners in translating their learnings into policy changes. Several utilities have outlined explicit steps they plan to take to enact policy changes within their organisations, such as improving worker and site safety, addressing gender-based violence, and managing non-revenue water.

"I will put all the new things I learned from this program to work on solutions when we are planning and building the future."
-Partner from Asian water utility

"Realizing that the knowledge I've gained working in the water industry is of immense value to the Tongan Water Board to help them manage their critical assets, as well as plan, respond and recover to the impacts of climate change and other natural disasters. Experiencing a Pacific Island culture was also immensely interesting and rewarding."
-Partner from Australian water utility

Figure 13. Participants held learning sessions based on agreed action plans

4.5.2 Confidence, Leadership, and personal growth outcomes

Most significant changes reported included:

- Improvements in corporate culture, staff motivation and business systems
- Staff being promoted and recognised for their leadership skills

Significant changes reported include improvements in corporate culture, staff motivation, and business systems, as well as staff being promoted and recognised for their leadership skills. All participants began the journey with personal goals and aspirations. Utilities identified learning and personal development goals at the start of the partnership program and leveraged engagement opportunities during the tours to achieve them. Australian partners expressed a keen interest in advancing their leadership skills by leading teams, facilitating discussions, and providing guidance. Feedback from the study tours demonstrated higher satisfaction levels among participants, who felt motivated and inspired by the program (both Australian and international partners).

International participants gained a new appreciation for planning and time management, as well as the diverse mindsets with which their partner utilities operate. The study tours inspired participants to develop new aspirations, improve their leadership skills, build effective teams, and work on projects and tasks they are passionate about. Both international and Australian utilities had staff who were promoted as a result of their leadership skills being recognised through the program, a direct outcome of the partnership for those individuals and their teams.

"This partnership has enabled me to become more confident in myself both professionally and personally. I have become a better public speaker and recognition within my company"
-Partner from Pacific water utility

Figure 14. Partners meeting in Vietnam.

"I would like to express my sincere gratitude to AWA for organizing and facilitating this study tour. It has been an exceptional learning experience, and I am grateful for the opportunity to expand my knowledge and skills in the water industry." – Asia-Pacific Water Utility Partner

Australian partners in particular reported that their careers had been developed by the partnership program. In one case, a participant gained public speaking skills and has now transitioned into a more senior role in the organisation after his leadership skills were demonstrated through the program. Australian water utilities also reported increased engagement across the organisation, with people from different parts of the water utility understanding each other's roles for the first time, spurring greater coordination within the water utility as well as morale boosting. In one Australian water utility, regular cross-organisational sharing has now commenced, informed and inspired by the partnership program.

Careers were also reported to be supported and developed in international partner utilities, YWPs from Indonesia, for example, having new opportunities and ways to demonstrate new skills and leadership qualities that have supported their careers in the short and long term.

"This knowledge would assist me to better integrate these considerations at the strategic planning phase of projects, to address the impact of this on long-term planning and strategy, and by doing so better set our strategic projects up for success in delivery, maintenance and operation. It will also support my adaptability and critical thinking skills by working through the challenge of applying familiar frameworks/systems in unfamiliar contexts." - Australian Utility Partner

"A key learning interest is simply the understanding of how a similar issue (water supply safety and reliability) is addressed in a different setting, and the different cultural issues to be considered. I think our [Pacific Water Utility] colleagues do a lot with less support from systems, structures and tools that we take for granted here – so a lot can be learned from their intelligence, resilience and innovation in doing so". - Australian Utility Partner

"The Study tour far exceeds my expectations in that we had been taken through the Customer Service and Billing processes of the [Australian partner water utility] as well as visiting the Waste Water Treatment Plant. The fact that [Australian partner water utility] is allowed to be involved in other income generating activities is also a new insight for me." - Pacific Water Utility Partner

4.5.3 Relationship building and partnerships outcomes

Most significant changes reported included:

- Knowledge Exchange and Skill Development: The program fostered a collaborative environment for knowledge exchange and skill development. Sharing resources and experiences, such as business cases and agreements, benefitted all participants.
- Mentorship and Support: Established partnerships provided valuable support and guidance. A program participant highlighted the "big brother" role played by a more experienced utility, with practices being adopted.
- Training and Capacity Building: Initiatives like training programs empowered participants to train others and enhanced overall capabilities.

The most significant changes reported included knowledge exchange and skill development, mentorship and support, and training and capacity building. The partnership program fostered a collaborative environment for knowledge exchange and skill development. Sharing resources and experiences, such as business cases and technical documents, benefitted Asian and Pacific participants. Established partnerships provided valuable mentorship and support, with a program participant highlighting the "big brother" role played by their Australian partner utility, leading to the adoption of successful practices such as an adapted Certificate 4 training process. Training programs empowered participants to train others, enhancing overall capabilities of the utilities, not only the direct participants.

In-depth interactions with utility partners and knowledge exchange sessions allowed participants to establish personal and professional relationships during the study tours. Feedback from the surveys highlighted that participants not only interacted and sought professional support but also established new friendships. The study tour provided participants with an opportunity to learn about different cultures and sparked interest in understanding various approaches adopted by partner utilities, both Australian and international, to address similar problems. It was clear from surveys, micronarratives, most significant change stories and engagement at Ozwater and other conferences that trusting friendships were the backbone of the program and that participants went out of their way to show hospitality, kindness and generosity to each other.

" I was able to develop relationship outside of this program. I met good people that are very experienced and learn to understand people behaviours."
-Partner from Pacific water utility

Figure 15. Solomon Water and Goulburn Valley Water during a study tour in 2024.

4.6 Documentation and sharing of evidence related to this outcome area (utility to utility)

For a detailed accounting of communications related to each outcome area, see Annex 2.

Figure 16. Water utility partners inspecting equipment together

Figure 17. Partners from Solomon Water and Goulburn Valley Water have developed a strong bond through the joint learning and implementation activities.

5 Increased engagement and knowledge sharing between utilities and associations

3. Increased engagement and knowledge sharing between utilities and associations

As explained in the sections above, activities delivered through the program supported not only utility-utility and association-association partnerships, but also between associations and their members, the utilities themselves. The following section offers reporting against activities and outcomes for this outcome area 3 for the Theory of Change.

5.1 Activities delivered

Table 4: Examples of activities conducted between associations and water utilities

Activity	Activities conducted between associations and water utilities
Associations action plans specifying learning/capacity development needs	• Three action plans were developed in consultation with the associations and utilities. All three included knowledge sharing related activities as one of the focus areas for further capacity development.
Hands-on learning (study tours)	• PERPAMSI attended in-bound study tours with members from Australian partners Giri Menang in Tasmania (host: TasWater) and Tirta Musi in Melbourne, Victoria (host: Yarra Valley Water), as well as outbound tours in Lombok (host: Giri Menang) and Palembang (host: Tirta Musi). • VWSA and water utilities attended and actively participated in GEDSI training in both Phu Tho and Can Tho in Vietnam. • After Ozwater'23, PWWA joined Tonga Water Board on a study tour to Unitywater in SE Queensland. In addition, in early 2023 AWA staff travelled to PWWA offices in Samoa to co-design action plans. • VWSA attended outbound study tours in Hoa Binh (2 times) host by Hoa Binh Clean Water Company, in Can Tho (1 time) host by Can Tho Water Supply and Sewerage Company and Phu Tho (1 time) host by Phu Tho Water Supply Company and inbound study tour with Can Tho Wassco in Brisbane, QLD host by Urban Utilities.
Workshops	• Dedicated time was spent during the study tour to Lombok in 2023 on strengthening the relationship between PERPAMSI and Giri Menang, and PERPAMSI and AWA, through focused discussions and an additional workshop.
Targeted meetings	• AWA attended the PWWA conference in 2023 where targeted meetings were held between AWA, PWWA, DFAT, ADB, World Bank, BecaHunter H20, and Pacific utility partners. • PWWA and AWA supported member utilities via multiple points of engagement with Tonga Water Board and Solomon Water to develop their knowledge exchange capacities through multiple workshops, meetings, communications products and presentations, including a co-presentation on the Program at the August 2023 PWWA Conference in Palau.

	• Through multiple design meetings, PWWA and AWA supported Solomon Water, Goulburn Valley Water, Tonga Water Board, and Unitywater to present Program outcomes at Ozwater'24, as well as presenting on a panel themselves focused on water associations' role in achieving climate resilience. • AWA held targeted meetings with PERPAMSI in November 2023 and January 2024, prior to and after study tours, with actions from meetings (including with PERPAMSI's members Gigi Menang and Tirta Musi) and priorities in the PERPAMSI – AWA Action Plan on the agenda. • AWA and VWSA organised multiple targeted online meetings with Vietnam and Australian Water Utilities to provide cultural awareness, instructions on developing Actions Plan and effective implementation of priorities. This helped facilitate the organisation of inbound and outbound study tours and coordination between the utilities and associations.
Webinars	• PERPAMSI facilitated several webinars with local utilities in Indonesia to allow members Giri Menang and Tirta Musi so share their newly acquired knowledge and skills from the partnerships.
Engagement at Ozwater	• All three partner associations came together with water utilities at Ozwater in 2023 and 2024 for workshops and panel sessions.
Engagement and learning at international conferences	• In August 2023, AWA travelled to the PWWA conference in Palau to support program participants from Solomon Water and Tonga Water Board present on the Program as part of the Knowledge Exchange action area. • PWWA travelled to the World Water Forum in Bali in May 2024, presenting the feature video developed during the program, and sharing learnings from the workshop via panels and presentations.

5.2 Outcomes from engagement and knowledge sharing between utilities and associations

The association's understanding of how to increase the value for their members, effectively communicate that value, and work towards building a shared sense of value grew as a result of their engagement with the Australian Water Association, and with their members.

Engagement between utilities and associations resulted in improved relationships and collaboration based on a deeper understanding of each other's contexts. One association has started to enhance data management of their members, potentially leading to better communication in the future. Another association has begun improving communications with their members, which could lead to improved services and offerings.

Overall, while the outcomes from improved engagement between associations and their members are a long-term proposition, fundamental steps have been taken. These include better understanding members' wants and needs, as well as improved management of member engagement and communications.

One association in particular, PERPAMSI achieved a lot against this action area, and this is detailed in the case study below.

6 Evidence of improved understanding of the benefits of inclusive (GEDSI) practices (contributions to end of program outcomes)

6.1 Activities delivered

Table 5 : GEDSI activities delivered as part of the program

	Activity delivered
Action planning	All action plans were developed with GEDSI ideas for actions which were presented by AWA team for inspiration and to see if partners wanted to prioritise those issues in their action plans. These options were provided by the Australian GEDSI expert who has experience delivering GEDSI and water related programs in each context. Vietnamese partners enthusiastically took up the option of incorporating GEDSI in their program.
Training and utility and association planning	In January 2024, Gender Equality and Inclusion (GEDSI) expert, Ms. Pham Thu Hien, with Melita Grant and UTS-ISF and Kirsty and Huy from AWA conducted Gender Equality, Disability, and Social Inclusion (GEDSI) training in Vietnam. This training initiative was supported by the Vietnam Water Supply and Sewage Association (VWSA) and the National Center for Rural Water Supply and Environmental Sanitation. Sessions were held in Can Tho and Phu Tho, engaging water utility representatives and senior management. The training content was tailored to address GEDSI issues specific to Vietnam, supplemented by Australian and international perspectives delivered by AWA and UTS-ISF. Four sessions took place in January, followed by additional sessions in April to discuss each utility's plans for enhancing GEDSI within their operations.
Online training	Melita Grant delivered pre-study tour trainings for delegations related to GEDSI so that participants were aware of GEDSI considerations before they left Australia and had a chance to ask questions.
Selection of people to be part of the program	Partners were proactive around choosing women to be part of the program, including YWPs. This resulted in 201 women and 431 men being part of study tours and 29 women and 53 men participating in the international program activities at Ozwater'23 and Ozwater'24. YWPs were also encouraged to present during the study tours.
AWA team training	Melita Grant provided a workshop on GEDSI concepts and approaches prior to starting the program so that all AWA team members had a common understanding and nomenclature with respect to GEDSI. Some staff changes meant that not all AWA staff received this training, but most did.
Women on panels	Women were chosen to be part of panels and public presentations including at both Ozwater's during the program, and during study tours and online for webinars.

6.2 Outcomes from inclusive (GEDSI) activities

A range of outcomes were achieved from the GEDSI activities involved in the program. These included but were not limited to:

Promotion of women role models: as being selected to be part of the program, in videos and social media, in being given opportunities to speak in public and represent their organisations (both Australian and International participants)

Increase in confidence: women reported during the MSC interviews that their confidence had grown as a result of the program, that they had new ideas and confidence to implement them, and that they were able to manage their family life and caring responsibilities so as to be part of the program with no challenges reported.

Career development: When asked if the program had supported their career and may lead to more opportunities in the future, both international and Australian participants reported that it had been helpful and that their leadership capabilities had been enhanced.

GEDSI plans developed by Water Utilities: Follow up sessions with senior management and staff from Vietnamese water utilities demonstrated that each participating utility had plans to deepen their GEDSI efforts and had a better understanding of their baseline gender parity issues.

Box 2

In January 2024, in collaboration with UTS Institute for Sustainable Futures, Vietnam Water Supply and Sewage Association (VWSA), and the National Center for Rural Water Supply and Environmental Sanitation, the Australian Water Association (AWA) and Gender Equality and Inclusion (GEDSI) expert, Ms. Pham Thu Hien, delivered Gender Equality, Disability, and Social Inclusion (GEDSI) training in Vietnam. The training offered Vietnamese water leaders and professionals an opportunity to enhance their understanding of diversity and inclusion issues relevant to their roles, along with practical ways to support and promote diversity and inclusion in Vietnam's water sector. Participants included executive leaders, mid-level management, and technical staff from Vietnamese urban and rural water utilities, including Phu Tho Water Supply Company, Can Tho Water Supply and Sewerage Company, Hoa Binh Clean Water Company, and An Giang Provincial Centre for Rural Water Supply and Environmental Sanitation. The face-to-face training program attracted 100 participants across two locations in Vietnam.

Figure 19. Ms. Pham Thu Hien, delivered Gender Equality, Disability, and Social Inclusion (GEDSI) training in Vietnam

Figure 18. VWSA Ha Thanh Hang providing the opening speech at the GEDSI training in Vietnam in January 2024.

Figure 20. Solomon Water staff who were part of the program

Table 6: Activities conducted with people having disabilities

Activity	Women	Men	People with disabilities	Total
Scoping Activities	41 (32.5%)	85	Unknown	126
Study Tours – First Round	73 (33%)	148	Unknown	221
Study Tours – Second Round	117 (30%)	268	2*	385
Ozwater'23	12 (31%)	27	Unknown	39
Ozwater'24	20 (43%)	26	1*	46

*Possibly more, did not ask people to identify, only to let AWA know if they had any needs to be supported by AWA or partner organisation in order for them to participate fully in the program.

6.3 Documentation and sharing of evidence related to this outcome area

For a detailed list of communications outputs mapped to each outcome area, please see Appendix 2.

7 Case Study 1: Solomon Water and Goulburn Valley Water

7.1 Introduction

This case study provides an overview of the partnership between Solomon Water (Solomon Islands) and Goulburn Valley Water (Australia) which was developed and facilitated by the Australian Water Association in 2023 - 2024. The program was supported by the Australian Water Partnership, funded by the Australian Government's Department of Foreign Affairs and Trade (DFAT). The partnership was established to accelerate climate smart and resilient water development through capacity building in ways that were identified as priority needs by Solomon Water and Goulburn Valley Water. Partners worked to exchange and embed water knowledge, skills, and expertise to accelerate the development of climate smart and resilient water sector capacities.

7.2 Solomon Water profile

Solomon Water is a State-Owned Enterprise (SOE) established in 1992 to provide water and wastewater services. Operating over an area of more than 50 square kilometres, Solomon Water services a population of 120,033 people through 180 km of pipelines with a diameter of 100 mm, carrying drinking water. The utility owns and operates 14 drinking water pump stations and has the capacity to service 82% of properties across the Solomon Islands as of 2022. Solomon Water also collects 514,264 KL of water with two active pumping stations in service.

Solomon Water employs 230 staff members, and the utility plans to expand operations to two or three more provincial centres in the next few years. Currently, Solomon Water is implementing one of the largest water-related infrastructure upgrade programs in the Pacific, with over USD 32 million of work under construction and more in development. With a growing customer base of more than 15,000, Solomon Water's annual turnover is approximately SBD 120 million, excluding donor-funded capital expenditures.

Non-revenue water is 58% for the network that Solomon Water services, which has consequences for water storages, revenue, and costs involved in treatment and pumping.

Figure 1: Map of Solomon Islands. Source: CSIRO and SPREP (2021)

7.3 Access to water and sanitation in the Solomon Islands

67.45% of the total population in Solomon Islands have access to basic levels of drinking water, and 35.02% have access to basic sanitation as shown in the figures below.

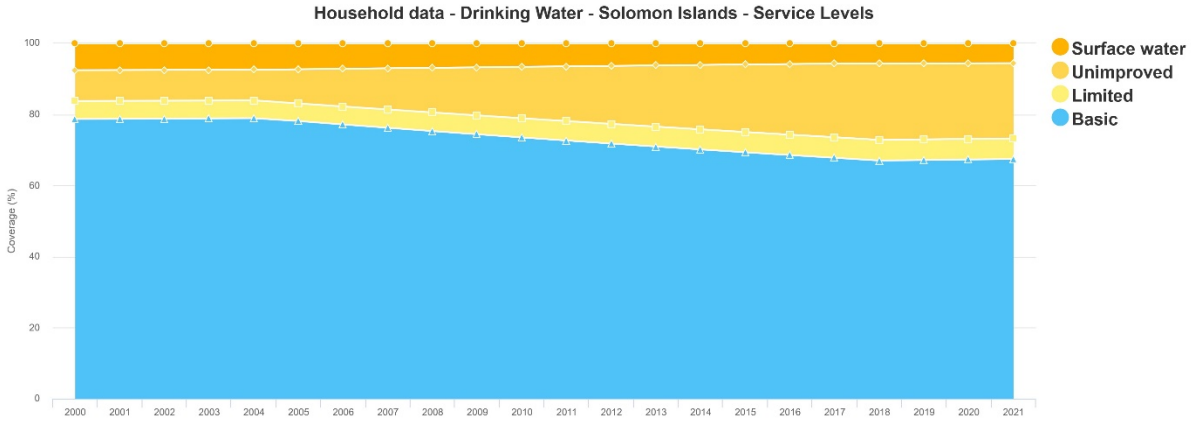

Figure 21. Solomon Islands drinking water levels. Source: JMP, 2024

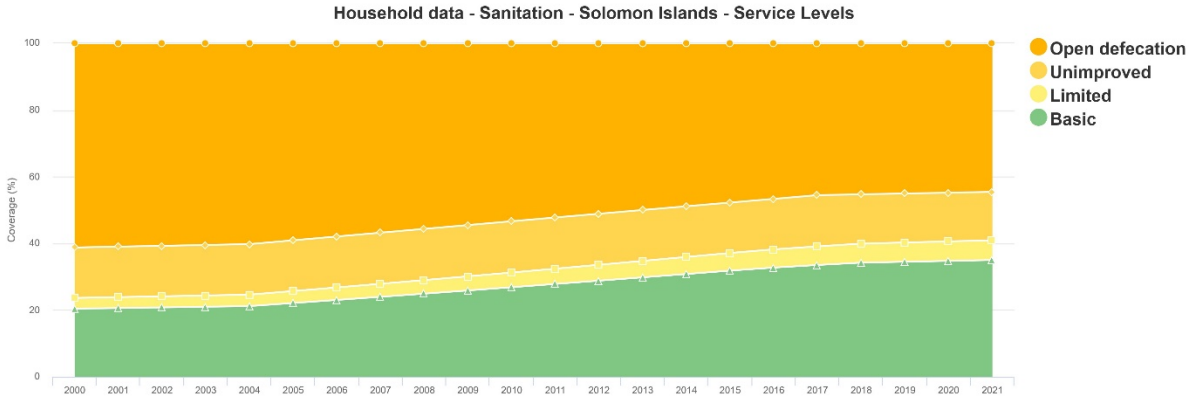

Figure 22. Solomon Islands sanitation service levels. Source: JMP, 2024

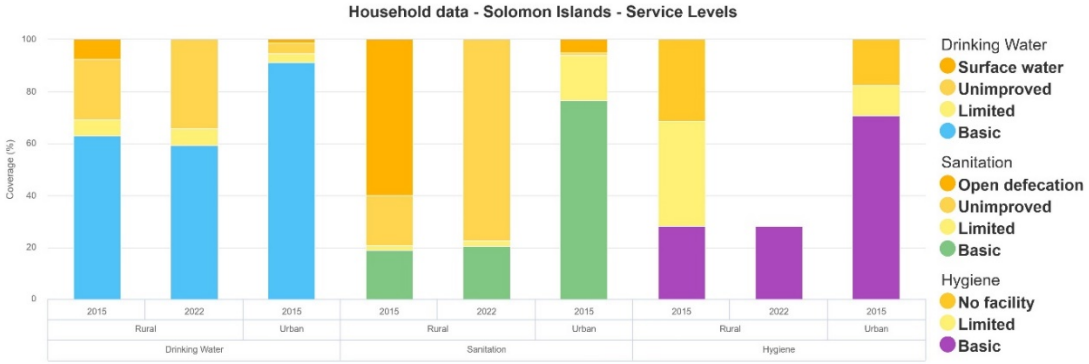

Figure 23. Solomon Islands water, sanitation and hygiene service levels. Source: JMP, 2024

7.4 Climate change issues in Solomon Islands

Solomon Islands is experiencing severe impacts from climate change. As explained by Australia's Department of Foreign Affairs and Trade:

> "Solomon Islands is one of the most vulnerable countries in the world to the impacts of climate change and disasters. The projected increase in average cyclone intensity, combined with sea level rise and increased rainfall rates, is expected to increase cyclone impacts. Heat stress will impact the health of communities, and along with the risk of drought, threaten productive sectors such as the cocoa industry. With over 80 per cent of the population living in low-lying coastal areas, storm surge, king tides and sea level rise present significant challenges."[3]

Historical rainfall trends are unclear in Solomon Islands given poor data coverage and high climate variability. Also, the projected direction and magnitude of rainfall change is less clear than for temperature. [4]

There are a range of possible future changes in annual and seasonal rainfall in the Solomon Islands as a result of climate change, from wetter through to drier, largely determined by how the South Pacific Convergence Zone (SPCZ) changes. To plan for these possibilities, it is useful to assess the impact of both a wetter and a drier future[5] which is a challenge for any water utility.

As Scravin Tongi from Solomon Water discusses in this video: *"If we do nothing now, the problems will only get worse."*

Scravin Tongi from Solomon Water talking about the importance of acting on climate change. Accessed at: https://youtu.be/V76rLn0KZNI?si=jPDB69suhVQRRobE&t=368

[3] DFAT: https://www.dfat.gov.au/about-us/publications/solomon-islands-australias-commitment-to-strengthening-climate-and-disaster-resilience-in-the-pacific

[4] CSIRO and SPREP (2021). 'NextGen' Projections for the Western Tropical Pacific: Current and Future Climate for Solomon Islands. Final report to the Australia-Pacific Climate Partnership for the Next Generation Climate Projections for the Western Tropical Pacific project. Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Secretariat of the Pacific Regional Environment Programme (SPREP), CSIRO Technical Report, Melbourne, Australia. Accessed at:

[5] CSIRO and SPREP (2021)

7.5 Goulburn Valley Water profile

Extending from the outskirts of Melbourne in the south to the Murray River in the north, the Goulburn Valley Water network covers approximately 20,000 square kilometres. Goulburn Valley Water services a population of 135,000 spread across 54 towns and 50,000 households through 37 water supply systems and 26 wastewater management facilities. Goulburn Valley Water employs 238 staff, comprising 67 women and 171 men.

Goulburn Valley Water has an ambitious 2035 Strategy that focuses on delivering core services as efficiently as possible. This strategy includes exploring new opportunities in the circular economy, reducing carbon emissions, and identifying adjacent market opportunities. To achieve these goals, they are seeking innovative methods to bring global best practices to regional utilities in Australia.

7.6 Partnership Development

Solomon Water and Goulburn Valley Water (GVW) were matched by AWA because they were similar sizes and GVW is a regional water utility and not a large city water utility which means it is more relevant to the type of operations of Solomon Water.

Figure 24. Solomon Water and Goulburn Valley Water conducting a study tour in Solomon Islands.

Figure 25. Solomon water staff inspecting water meters with GVW staff

7.7 Challenges and Opportunities

Key challenges identified by Solomon Water to its operations included:

Non-revenue water: Huge losses in revenue due to water loss are creating financial challenges for SW operations. Financial losses have generated the need to seek external funding for Solomon Water to finance their required capital projects. Non-revenue water reduction focusing on single distribution zones rather than the entire network was identified as one of the priority areas for the partnership program.

Operational inefficiencies and lack of standard operating procedures: Outdated laborious manual processes (using spreadsheets) and lack of organisational standard operating procedures to support standardized quality across the organisation often result in operational inefficiencies. Absence of suitable tools and procedures result in slowing down of processes.

Staff turnover: Solomon Water has invested heavily in increasing staff number since the COVID-19 pandemic to improve their service delivery. However, despite that, Solomon Water has significant amount of staff turnover and operational skill loss in recent times.

Climate change impacts: Saltwater intrusion and drought are some of the challenges which require to focus attention because they are impacting the older infrastructure such as pipes.

7.8 Focus of the partnership

The action plan developed by Solomon Water, Goulburn Valley Water and AWA aimed to help the utilities to exchange and embed water knowledge, skills, and expertise to accelerate the development of climate smart and resilient water sector capacities. The Action Plan commenced in May 2023 and was completed in May 2024. The plan focused on the following three priority action areas as further explained in

.

1. **Climate resilient asset management practices**: co-design of solution to reduce saltwater ingress at Noro water source.[6]
2. **Climate resilient water management**: reducing physical water losses from the water network in pilot regions.
3. **Improved business resilience**: improving financial position by re-designing the “meter to cash” (billing) process.

"As an organisation, we need to be able to continue to deliver safe water 24/7 for the years to come and we need to come up with mitigation plans [to manage climate change impacts]."

- *Scravin Tongi, COO of Solomon Water*

[6] Noro is the location of a village where a river/stream is being inundated with salt water due to climate change and stronger than usual king tides.

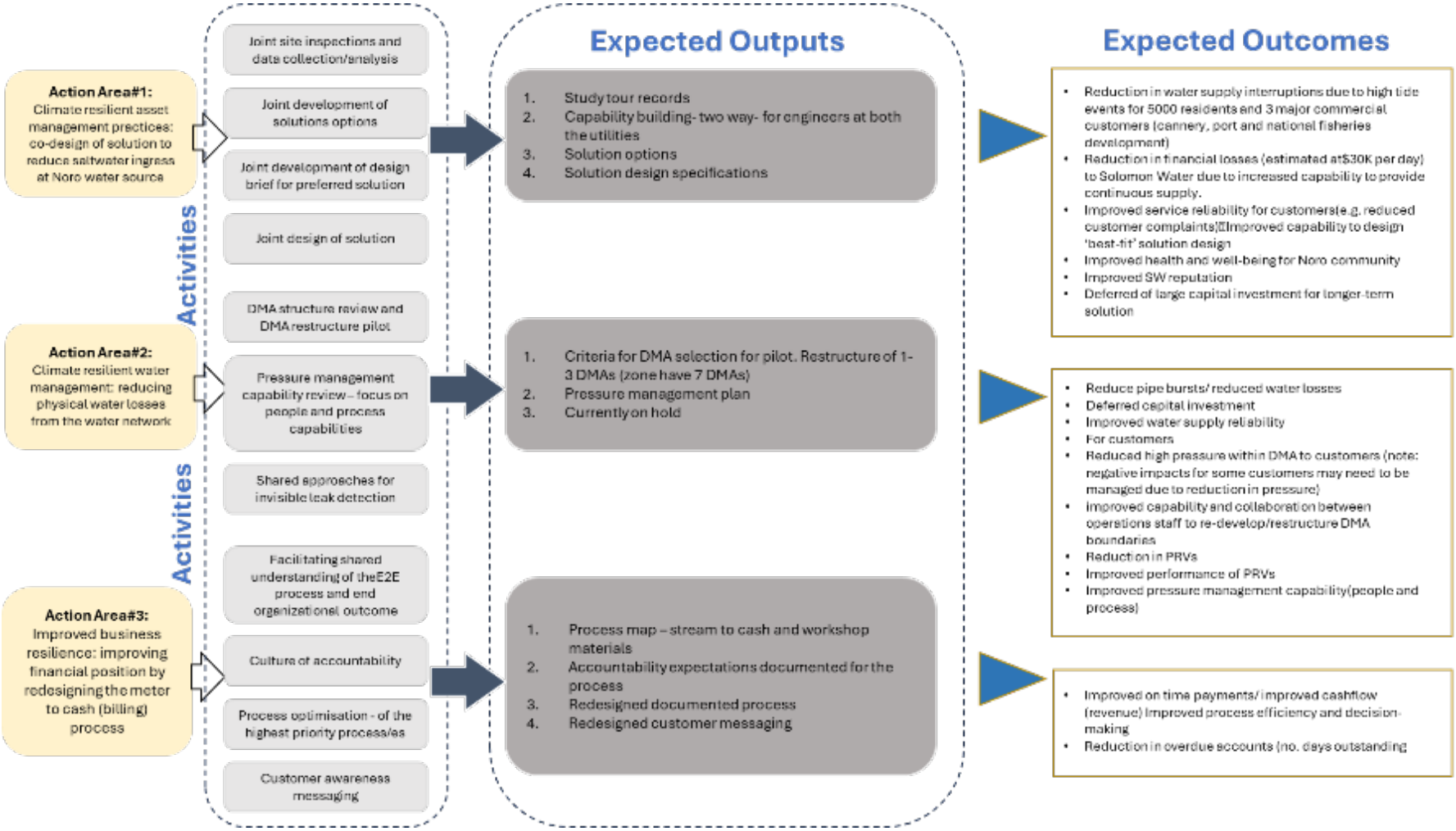

Figure 26. Action plan summary developed by Solomon Water and Goulburn Valley Water with AWA in May 2023

7.8.1 Partnership Activities

During the partnership (2023 – 2024) 4 study tours took place, as well as 1:1 meetings and mentoring between the partners. Specific activities included co-designing a way to manage saltwater intrusion impacting fresh water supplies in Noro, design of interventions to improve the meter to cash process, and review of network function and pressure management planning for three DMAs in Honiara.

The partnership aimed to address Solomon Water's immediate operational challenges while fostering a long-term strategic approach to water security. Solomon Water Chief Operations Officer Scravin Tongi emphasised the importance of understanding the broader picture, which allowed the utility to focus on both day-to-day issues and long-term planning. This dual focus helped strengthen Solomon Water's critical thinking and problem-solving skills, equipping it to face future challenges.[7]

GVW developed the following graphic to summarise some of the projects that the two utilities have conducted together over the 18-month period.

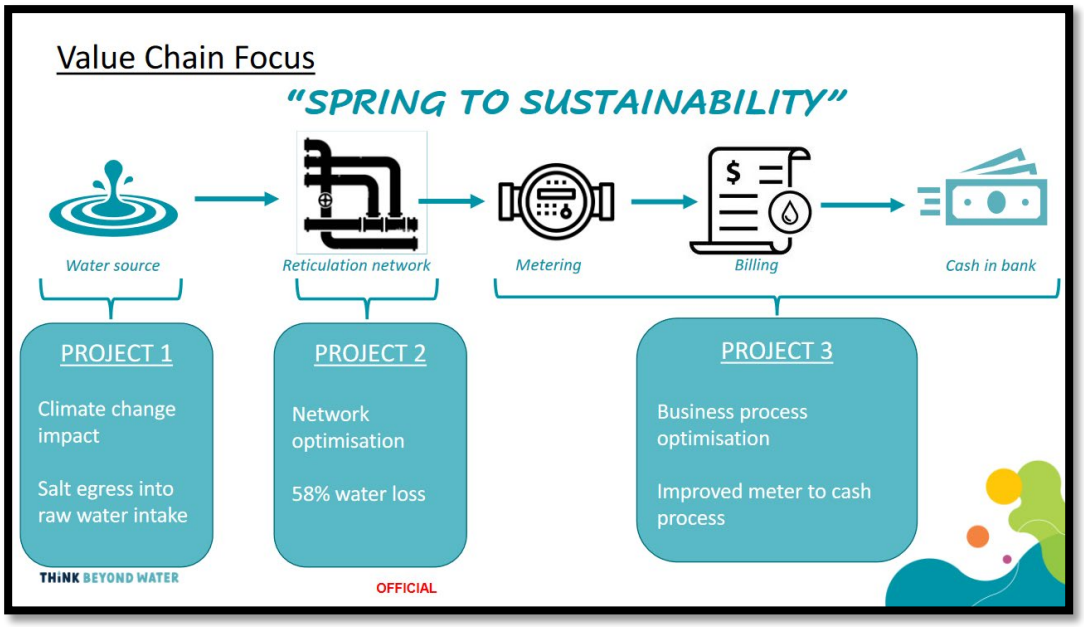

Figure 27. Projects that GVW and Solomon Water have conducted together

Figure 28. Partners working together to inspect wastewater systems

[7] AWA (2024) Current. Ozwater 2024.

Figure 29. Partners discussing water recycling and stream rehabilitation at GVW

Figure 30. GVW and SW staff visiting water treatment plants and discussing the SCADA system

The partners were engaged in four professionally managed week-long programs covering topics related to their action plans as well as topics of interest based on the expertise of international partners (e.g. IT systems). The following schedule provides an example of the types of activities the partners did during the study tour weeks.

	Monday	Tuesday		Wedensday		Thrusday		Friday
08 00	TRAVEL			Water Cycle in Action (cont)	Sewer retic network, sewer pump stations, waste management facility and Farming operations.	Action item Deep Dives	Each Action item groups break out and deep dive specific topics relevant to learnings from earlier in the week.	Free time and Hotel check out
09 00		GVW pick up at Melb Hotel & Travel	GVW team to pick up SW team in Melb.					
10 00								Travel to Southern Region
11 00		Lunch and Learn	Overview of GVW business and plan for the week.					Lunch at South West Depot
12 00				BBQ Lunch	Shepp Operations Centre			Kilmore and Bradford Waste Management Facility tour
13 00		Water Cycle in Action	Water treatement plant and reticulations network operations.	Business Operating System in Action	Meter to cash process including technology overview			
14 00								
15 00						Presentation	GVW team to present on their learnings from their Solomon Islands	Travel to Melb Airport
16 00						Free time		
17 00		Hotel check in and free time						
18 00						Formal Dinner	GVW Executive team to host SW team.	

Figure 31. Program for second study tour in Australia at Goulburn Valley Water, Shepparton.

7.9 Key successes of the partnership

Monitoring and evaluation information provided by participants found that Solomon Water has benefited from technical aspects of the partnership, in particular around topics such as:

- Efficiency (loss of water reduction)
- Improving sustainability through protection of water sources from saltwater intrusion
- Improving financial efficiencies from meter to cash
- Knowledge about ways to support vulnerable customers, and family violence policies and practices.

Factors that were seen to support the partnership included: *"willingness, patience, and accommodations on both sides. Listening to each other's issues and challenges and working through those issues and challenges together".*

Goulburn Valley Water staff expressed that they have seen big changes through the program in terms of the connections and friendships developed, and an understanding of the link between non-revenue water and climate resilience – e.g. reducing leakage and keeping the water in the system is a buffer to climate change impacts such as drought and protects raw water sources vulnerable to saltwater intrusion from overexploitation.

Figure 32. Elise O'Keeffe, GVW District Manager - Central Operations, on the way to the Noro source at Munda, New Georgia Island, Western Province of the Solomon Islands.

7.10 Being in tune with each other's culture

At the start of the partnership, Solomon Water representatives were asked for their advice on how best to work with staff from their water utility. They offered the following points to their counterparts in Australia:

- Drawing from previous twinning experiences and an understanding and navigating Solomon's culture is crucial.
- Approach the new environment with respect and an open mind. Acknowledge the pace of progress, particularly at the field level, where advancements may be gradual.
- Solomon Islanders express respect through quietness, but silence doesn't necessarily imply agreement. Engage in conversations, especially with field staff, who possess valuable experience they'll share when comfortable.
- Avoid coming across as superior or more knowledgeable. Recognise the distinct conditions and refrain from judging one environment over another.
- Prioritise understanding the problems and needs of the local community. Assist in enhancing their processes, skills, and behaviours, seeing the program through their perspective.

- Initiate conversations gradually. Spend time with people during lunch and social events to establish connections and build rapport.

7.11 Outcomes from the partnership

As the surveys and MSC stories were confidential[8], the following outcomes from the program have been drawn from published material, notably an article which appeared in the AWA magazine:

CASE STUDY #1

PARTNERING IN THE PACIFIC

Project: Overview of groundwater in the MDB

Region: Solomon Islands

Started: 2021

Leader: Australian Water Association

Facilitated by the Australian Water Association, one recent international utility partnership showcases how working together can help build regional resilience to climate change.

By Adam Turner

With a population of more than 700,000 people, spread across around 350 islands, the Solomon Islands faces significant water security challenges that are being exacerbated by climate change, including saltwater ingress due to sea-level rise, as well as the growing frequency and severity of tropical cyclones.

To tackle these issues, Solomon Water teamed up with Goulburn Valley Water as part of the

"Once the team from Goulburn Valley Water had first-hand experience of our challenges, we could start to look beyond day-to-day issues and also focus on the big picture."

Screvin Tongi, Chief Operations Officer, Solomon Water

Australian Water Association's international utility partnerships program, and is one of eight pairings between Australian water utilities and their counterparts across the Pacific, Vietnam and Indonesia.

The partnership program is led by AWA through its International Development Program and funded by the Australian Water Partnership, as part of the Partnerships for a Resilient and Climate Smart Water Sector Program.

Solomon Water Chief Operations Officer Screvin Tongi said that, aside from addressing Solomon Water's immediate needs, the partnership also helped the utility take a more holistic view of water security and improve its long-term strategic planning.

"Once the team from Goulburn Valley Water had first-hand experience of our challenges, we could start to look beyond day-to-day issues and also focus on the big picture," he said.

"Rather than just addressing our immediate needs, the partnership also helped strengthen our critical thinking and problem-solving skills – such as SWOT and root cause analysis – so we are better-equipped to face the challenges that lay ahead."

AWA Head of International and Industry Programs Katie Hanniffy said the partnership program is part of a broader approach to strengthen regional water sector capacity to develop inclusive, climate resilient strategies and practices through international partnerships.

"It's about improving the health and wellbeing of people in South-East Asia and the Pacific region through supporting the delivery of inclusive, economically sustainable, and climate resilient water and wastewater services," she said.

"Importantly, the AWA works alongside regional partner associations, including the Pacific Water and Wastewater Association, the Vietnam Water Supply and Sewerage Association, and PERPAMSI in Indonesia, in facilitating the water utility partnerships."

PLAN OF ACTION

Goulburn Valley Water Central Operations District Manager Elise O'Keeffe said after working closely with Solomon Water, it became clear that empowering the water utility to become more financially resilient was critical to addressing long-term climate issues.

"Non-revenue water hampers Solomon Water in a number of areas, so the utility needed to identify where to focus its efforts to have the biggest impact," she said.

"If you're not financially resilient then you can't invest in climate resilience. That said, we couldn't just waltz in with an Australian solution. We needed to listen and understand their needs, to help them develop fit-for-purpose solutions they can operate and maintain long-term.

"Otherwise, we'd be at risk of imposing complex and expensive assets that fall into disrepair because they're not right for local conditions – which helps no-one in the long-run."

Working together, the two teams formed an action plan that targets three key issues: saltwater ingress, water loss and revenue challenges.

Firstly, the impact of saltwater ingress forces Solomon Water to cut the supply to residential and industrial customers for several days at a time, causing major disruption and costing the utility in terms of lost revenue.

Barriers to prevent saltwater ingress may offer short-term relief, according to Tongi, perhaps combined with off-stream storage. Solomon Water is also considering long-term solutions that require more data and analysis, such as the potential to shift water sources to higher ground, while understanding the impact this will have on the downstream ecology.

Secondly, high pressure issues causing water loss in Honiara's city-wide network are complicated•

Business

The action plan targeted three primary issues: saltwater ingress, water loss, and revenue challenges. The following actions were developed in line with these three thematic areas:

Saltwater Ingress:

Saltwater ingress forced Solomon Water to cut supply to customers, causing major disruptions and revenue loss.

- Short-term solutions included barriers to prevent ingress and off-stream storage.
- Long-term solutions involved shifting water sources to higher ground, requiring more data and analysis.

Water Loss:

High-pressure issues in Honiara's network resulted in a 58% rate of non-revenue water, severely impacting financial resilience.

- A pilot project in three District Metered Areas aimed to combat non-revenue water and improve distribution efficiency through strategic use of pressure reducing valves and pressure break tanks.

Billing and Revenue Collection:

Systemic issues in billing and revenue collection contributed to high levels of overdue debts.

- Initiatives to streamline and strengthen the meter-to-cash process were implemented, focusing initially on the same areas as the non-revenue water pilot project.

[8] The outcomes from these data sources are incorporated in the aggregated information presented above.

The partnership also fostered a culture of critical thinking within Solomon Water. Encouraging staff to ask questions and engage in problem-solving was identified as a valuable outcome, crucial for building a sustainable water future in the Solomon Islands. Goulburn Valley Water's efforts to support these ways of thinking and coming to problems were seen as instrumental in driving improvements within Solomon Water.

The GVW-Solomon Water partnership exemplifies how international collaborations can address water management challenges while building resilience to climate change. By focusing on immediate needs and long-term strategic planning, the partnership has not only improved operational efficiency but also strengthened financial and organisational resilience.

Figure 33. GVW being gifted a very special beaded piece by Solomon Water partners. The piece was made by family members of the partners and holds immense significance and value.

8 Case study 2: PERPAMSI and AWA Partnership

8.1 Water and sanitation in Indonesia

Water and sanitation in Indonesia face significant challenges despite improvements in recent years. Access to clean water remains limited, particularly in rural areas where infrastructure is lacking. Sanitation facilities are also inadequate, with many communities relying on open defecation due to the absence of sanitation systems (JMP 2024).

Poor water quality contributes to health issues, including waterborne diseases such as diarrhoea. Urbanisation exacerbates these challenges, placing strain on existing infrastructure and further widening the gap in access between urban and rural areas. The water provided by water utilities in Indonesia, and those involved in the partnership program is not potable, and so householders either boil the water or use other sources (e.g. bottles) for drinking.

One of the biggest challenges facing PDAMs (Indonesia's local water companies) is water loss, with a national average of 33.24% non-revenue water (NRW)[9].

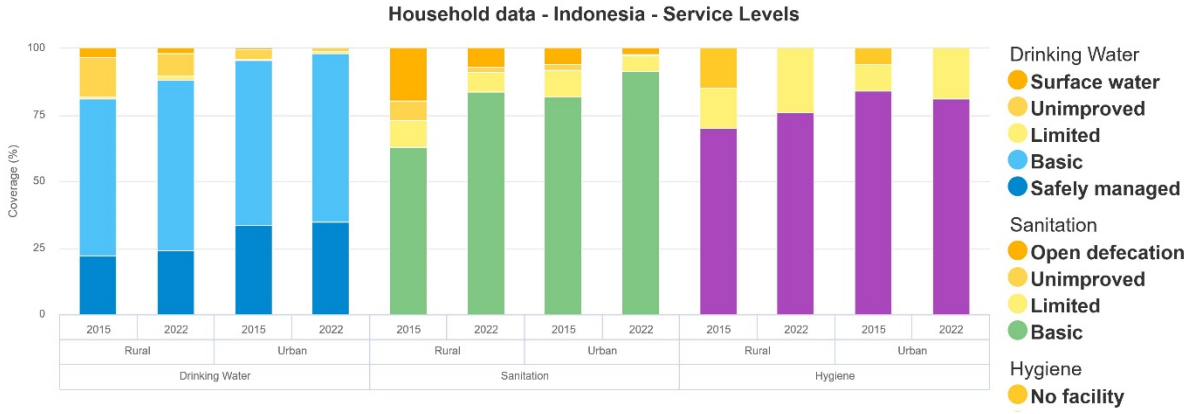

Figure 34. Household data for water, sanitation and hygiene in Indonesia. Source: JMP 2024.

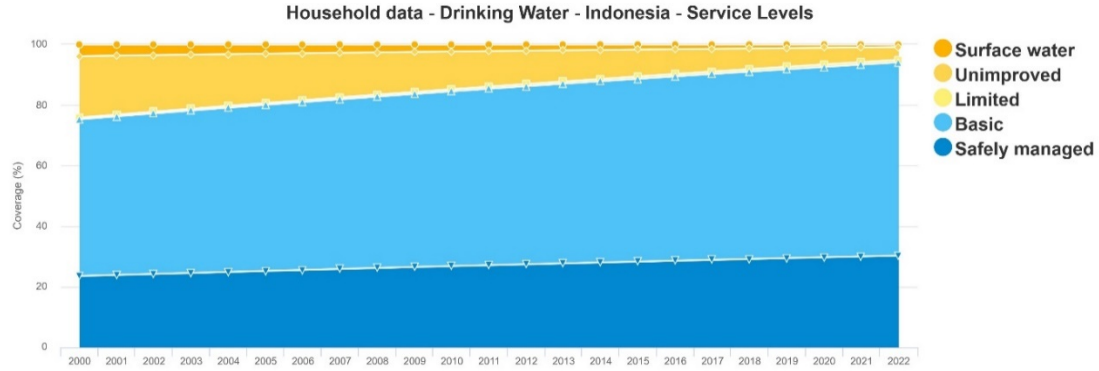

Figure 35. Household data for drinking water in Indonesia. Source: JMP 2024.

[9] Source: https://smartwatermagazine.com/blogs/putri-respati/indonesias-water-sector-leveraging-digital-transformation-better-water

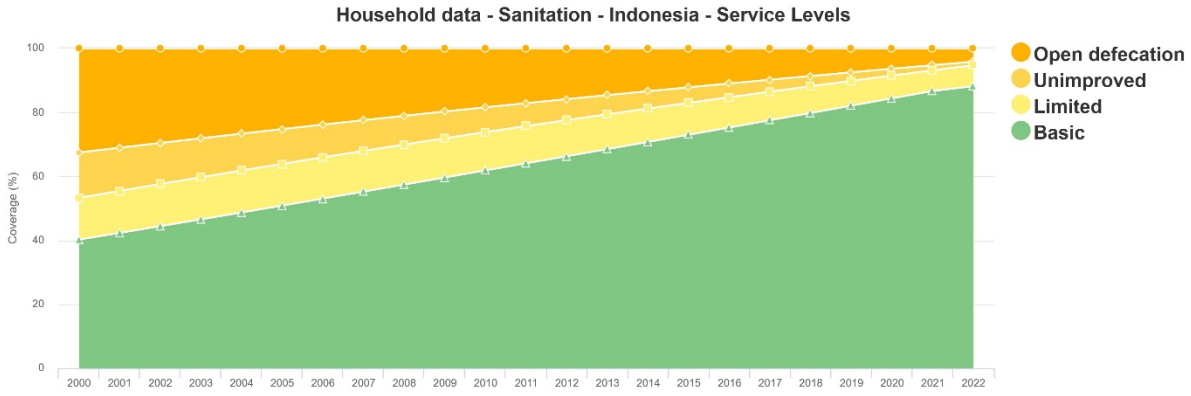

Figure 36. Household data for sanitation in Indonesia. Source: JMP 2024.

8.2 The partnership

The partnership between AWA and PERPAMSI was formally established through the signing of a Memorandum of Understanding (MoU) in 2016.

8.3 Background to a long-term partnership (pre-2022)

Since 2016, AWA and PERPASMI have led and enabled collaboration between Australian and Indonesian water sectors through the following initiatives:

- Indonesia-Australia Water Utility Improvement Program (2019 – 2021) connecting three Australian water utilities and two PDAMs and one PDPAL
- YWP activities to connect and inspire the development of Indonesia's future water professionals including the recent Online Emerging Water Leaders Program
- Gender Equality and Social Inclusion workshops that have engaged over 100 individuals
- Water quality workshop and capacity building workshops
- Supported Indonesian utilities response and recovery approaches to COVID-19 through the Australian Telewater Network platform
- Virtual Reality Site Tours for a large number of Indonesian water utilities to Wastewater Treatment and Water Recycle Facilities hosted by Melbourne Water and Sydney Water
- Australian delegations to Indonesia Water and Wastewater Expo & Forum in 2019
- Inbound delegations of Indonesia Government Officials, DFAT and Indonesian water utilities to Ozwater'16, Ozwater'17, Ozwater'18, Ozwater'19 and Ozwater'22

Achievements of the partnership **from 2019 - 2021** included:

- Improved quality of water supply and wastewater management service delivery of the two PDAMs and one PD PAL which service over 4.8 million customers of Surabaya, Jakarta, and Bali. Includes: completion of HACCP analysis and improved chlorine residual.
- Improved utility operational efficiency of the two PDAMs and one PD PAL. Includes: significant reductions in non-revenue water and installation of SCADA system.

- Improved financial and asset management of the two PDAMs and one PD PAL. Includes: certification to ISO55001, development of integrated information systems, implementation of asset management systems.
- PDAM and PD PAL organisational policies and strategies are now inclusive of Gender Equality and Social Inclusion. Includes: support for vulnerable customers, understanding of employee demographics, female staff rotations into technical roles, working in the field and management positions, toilets for disabled staff and customers, nursing rooms for mothers and focus on fostering YWPs.
- In response to the pandemic, AWA and PERPAMSI surveyed Indonesian PDAMs and PD PALs to understand their challenges and how and where AWA and PERPAMSI could provide support. AWA and PERPAMSI subsequently facilitated COVID-19 knowledge sharing webinars attended by over 360 PDAMs and PD PALs supporting their response and recovery to COVID-19.
- Co-design and delivery of a series of workshops during the 8th Indonesia Water and Wastewater Expo & Forum (IWWEF) to exchange knowledge between water sectors.
- The Water Utility Improvement Program workshop was delivered with support from each of the six utilities participating in the program. Stakeholders from BPPSPAM (agency responsible for the regulation of drinking water supply companies) and Bappenas (National Planning Agency) attended to hear from the participants on their achievement to date and priorities moving forward. Australian utilities were also able to share knowledge on asset management, non-revenue water management and water quality reliability.
- The Gender Equality and Social Inclusion workshop was attended by over 100 water professionals and included presentations from each twin and leaders from the Victorian Government, Ministry of Women Empowerment and Child Protection, Bappenas (National Planning Agency) and PAMSIMAS (National Rural Water Supply and Sanitation Project in Indonesia).
- A YWP workshop was also delivered at IWWEF to support conversations that empower YWPs working in utilities in Indonesia to share their career knowledge and experiences with each other and identify solutions to complex issues and challenges that are facing Indonesia's water sectors.

While the outcomes of the Indonesia-Australia Water Utility Improvement Program (2019 – 2021) were impacted by the COVID-19 pandemic and associated travel restrictions, the commitment by both associations to continue to collaborate to collectively drive better water sectors outcomes remained strong, as evidenced by the re-signing of the MoU in Brisbane at Ozwater'22.

In 2023, AWA and PERPAMSI developed a 14-month action plan with three priority action areas:

1. "**Building business resilience** in both associations by improving member value through new and existing member offerings to drive a salient and climate smart water sector."
2. "**Improving data collection processes** to generate member and water sector insights to enhance PEPRAMSI's capacity to represent Indonesia's water sector with key decision makers."
3. "**Creating opportunities and providing the platforms** for Tirta Musi and Giri Menang to **share their learnings** on climate smart and resilient water management from their partnerships with Yarra Valley Water and TasWater with the wider water sector."

Action area three received the most attention during delivery of the action plan. To work on action area three (creating platforms for cross learning), AWA and PERPAMSI met with Tirta Musi following the second outbound study tour to summarise key learnings to date and develop a plan to share these key learnings with the wider water sector. This was followed by a meeting with Giri Menang.

After the second outbound study tour key learnings to date were summarised and a detailed plan to share these key learnings with the wider water sector was also developed. The two organisations provided their support to Giri Menang in implementing the plan.

AWA and PERPAMSI worked with Tirta Musi, Giri Menang, Valley Water, and TasWater to present program outcomes and learnings at Ozwater'24. This resulted in increasing the desired impact of the knowledge sharing and capacity building learnings to the wider PERPAMSI membership. It also strengthened the knowledge exchange processes between members, encouraging the implementation of new learnings across the Indonesian and Australian water sectors. This was monitored through a short poll during the workshop to understand the participants' interests and highlights. The key learnings were also documented as part of presentations. The gender mix of workshop presenters and participants was also recorded.

In support of action area three, PERPAMSI delivered the following activities, with AWA support:

Activity	Activities conducted between associations and water utilities
Hands-on learning (study tours)	• PERPAMSI attended in-bound study tours with members from Australian partners Giri Menang in Tasmania (host: TasWater) and Tirta Musi in Melbourne, Victoria (host: Yarra Valley Water), as well as outbound tours in Lombok (host: Giri Menang) and Palembang (host: Tirta Musi).
Workshops	• Dedicated time was spent during the study tour to Lombok in 2023 on strengthening the relationship between PERPAMSI and Giri Menang, and PERPAMSI and AWA, through focused discussions and an additional workshop.
Targeted meetings	• AWA held targeted meetings with PERPAMSI in November 2023 and January 2024, prior to and after study tours, with actions from meetings (including with PERPAMSI's members Gigi Menang and Tirta Musi) and priorities in the PERPAMSI – AWA Action Plan on the agenda.
Webinars	• PERPAMSI facilitated several webinars with local utilities in Indonesia to allow members Giri Menang and Tirta Musi so share their newly acquired knowledge and skills from the partnerships.
Engagement at Ozwater	• PERPAMSI representatives came together with water utilities at Ozwater in 2023 and 2024 for workshops and panel sessions.

8.4 Partnership Activities

Study tours:

Throughout 2023 and 2024, study tours were organised in Palembang (Tirta Musi) and Lombok (Giri Menang) in Indonesia, and Victoria (Yarra Valley Water) and Tasmania (TasWater) in Australia. These tours provided opportunities for representatives from PERPAMSI and AWA to meet face to face and strengthen their relationship and that of their members through meaningful discussions. (Water Source, 2023b). Representatives from PERPAMSI, including the Chair, Mr. Zaini, Executive Director Dr. Subekti and Expert Mr. Agus Sunara were active participants in these study tours.

Figure 37. Meetings in Jakarta, October 2023.

Figure 38. Study tour to Lombok in October 2023.

Figure 39. Meeting onsite with Tirta Musi, YVW, AWA and PERPAMSI representatives

Engagement at Ozwater:

In 2023 and 2024, senior leaders from PERPAMSI and AWA came together to speak on dedicated panels at Ozwater to the 'Importance of International Partnerships for Climate Resilience in the Water Sector' (Water Source, 2023b) and 'Uniting Water Leaders Across Our Region' respectively.

At Ozwater'24 in Melbourne, the panel featured the following senior leaders and representatives:

- Mrs Corinne Cheeseman, Chief Executive, AWA
- Ms Sarah Ransom, General Manager, AWP
- Pitolau Lusia Sefo Leau, Chief Executive Officer, PWWA
- Dr Subekti, Executive Director, PERPAMSI
- Dr Tran Anh Tuan, Vice Chairman, VWSA

PERPAMSI and AWA representatives remained present during the second panel session at Ozwater'24 about 'Insights from Utility Partnerships Across Southeast Asia and the Pacific' to support their respective members.

Learning exchanges:

In October 2023, PERPAMSI participated in a workshop with other AWA partners (PWWA and VWSA). AWA led the workshop and addressed three priority areas that were common to all three AWA partners being 1) Knowledge exchange practices, 2) Member value and business resilience, and 3) communications for impact.

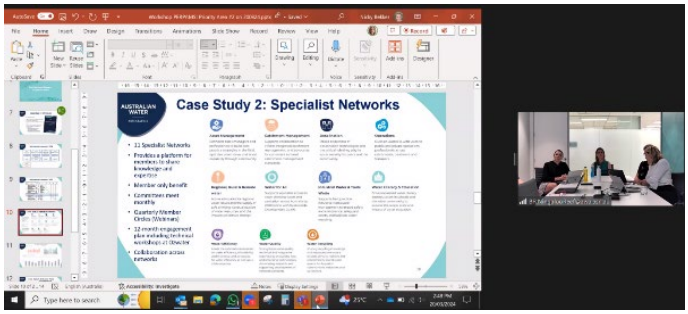

Figure 40. Online workshop with AWA, PWWA, VWSA and PERPAMSI

Conference support:

AWA connected with PERPAMSI, AWA and key stakeholders from across the Asia-Pacific region met at the Vietnam Water Week Conference/Exhibition, during which the Southeast Asian Water Utilities Network (SEAWUN) was launched.

Figure 41. Association representatives at the ceremony to launch the Southeast Asian Water Utilities Network (SEAWUN).

Government engagement and advocacy webinar:

On the 20th of March 2024, an online workshop convened to address government engagement and advocacy within the water industry. The session was attended by representatives from several organisations, including AWA, PERPAMSI, PWWA, and UTS-ISF. Each organisation provided an overview of their respective roles and objectives, particularly emphasising their efforts to influence government policies.

AWA presented three case studies illustrating their engagement strategies with members:

1. **NWI Inquiry:** AWA actively sought input from members on a government inquiry, demonstrating that topic relevance, not timing, drove member response. They synthesised member feedback into a submission that resonated well with their diverse membership base.
2. **Special Interest Groups:** AWA highlighted the value of their 11 special interest groups, which convene regularly to address specific water-related issues and promote cross-collaboration among members.
3. **Outbound Trade:** AWA surveyed members to gauge interest in outbound trade, aligning their services with member needs and preferences.

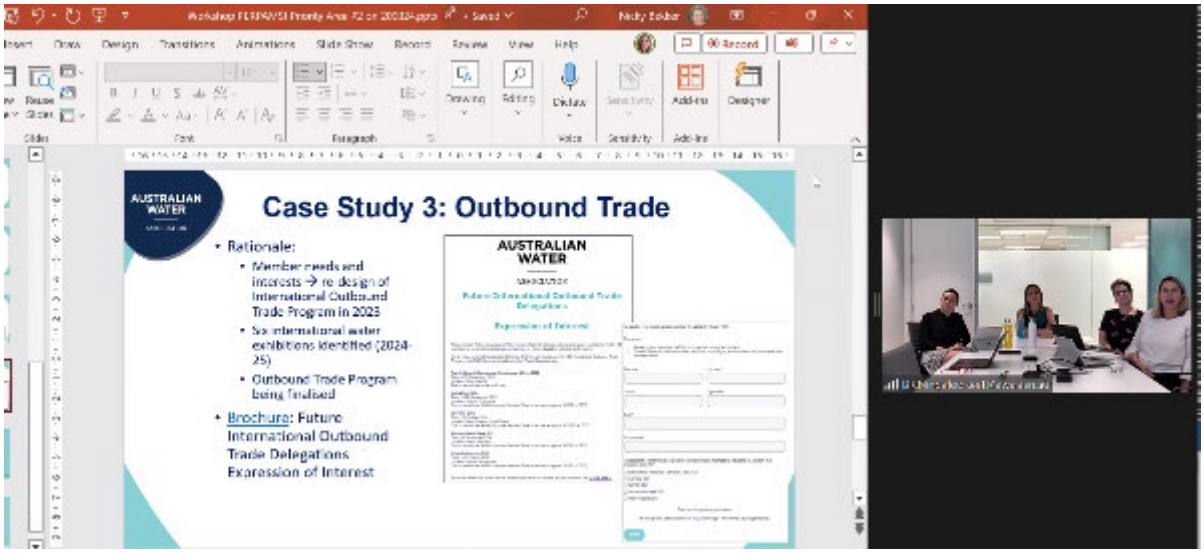

Figure 42. Webinar held on 20th March 2024 for association-to-association learning and networking

PERPAMSI emphasised its direct engagement with local governments, particularly concerning Law#17 and Law#15, pertaining to technical and institutional aspects of water management and water tariffs. Additionally, they highlighted their advocacy efforts regarding the renewal of Law#122, which impacted private companies and the drinking water value chain, while expressing concerns about the relatively low number of financially stable water utility companies in Indonesia.

PERPAMSI also discussed their funding sources, and their advocacy efforts representing members' interests to national water boards and government bodies. They described informal engagements, such as 'coffee meetings,' as platforms for expressing their views and addressing regulatory concerns. Additionally, they also engaged with their members and gathered their feedback via social media channels like Instagram and WhatsApp.

During the webinar, PWWA shared their experience from collaborative initiatives, particularly their involvement with the SPC water security technical group, underscoring the importance of community engagement and data connectivity across various regions. The PWWAs engagement with Ministers of Water from across the region was a key strategy that was used to elevate the importance of well supported and safely managed water utilities and services.

The session concluded with a broader discussion on enhancing impact within the water industry, highlighting the importance of targeted dissemination of organisational documents and advocacy efforts by influential figures to raise awareness about water-related issues.

Despite the challenges of generating interest and financial support for water initiatives, the participants underscored the significance of sustained advocacy and collaboration in driving positive change, and that forums such as this were helpful in prioritising advocacy and policy related activities.

9 Case study 3: Vietnam GEDSI Training

Empowering Diversity: Inclusion Training in Vietnam's Water Utilities

AWA with the UTS Institute for Sustainable Futures, the Vietnam Water Supply and Sewage Association (VWSA), and the National Centre for Rural Water Supply and Environmental Sanitation (NCERWASS), Ms. Pham Thu Hien, a Gender Equality, Disability and Social Inclusion (GEDSI) expert, led an innovative training initiative in Vietnam in January – April 2024. The GEDSI training was a key part of the Partnerships for a Resilient and Climate Smart Water Sector Program delivered in Vietnam and was requested by Vietnamese partners.

Cultivating Understanding

This training provided an important opportunity for Vietnamese water leaders and professionals to delve into diversity and inclusion issues relevant to their roles. The program aimed to equip participants with practical strategies to enhance diversity and inclusion within Vietnam's water sector.

Participants comprised executive leaders, mid-level management, and technical staff from various Vietnamese urban and rural water utilities, including Phu Tho Water Supply Company, Can Tho Water Supply and Sewerage Company, Hoa Binh Clean Water Company, and An Giang Provincial Centre for Rural Water Supply and Environmental Sanitation. Over 100 individuals actively participated in the face-to-face training sessions held across two locations in Vietnam.

Figure 43. Vice Chairman of VWSA Ha Thanh Hang gave the opening speech

Bridging Knowledge Gaps

During the face-to-face training, delegates gained insights into GEDSI issues within the Vietnamese context and explored international case studies highlighting Australia's efforts in addressing GEDSI challenges within its water utility sector. Ms. Pham Thu Hien shed light on the disproportionate burden of household responsibilities borne by women in Vietnam, emphasizing how unpaid care work often limits their career prospects.

According to VWSA data, in Vietnam, women represent 32% of the total workforce across water sector establishments, with only 7 out of 125 Water Utility Board Directors being women.

Figure 44. Workshop participants in Vietnam

Pledging for Progress

VWSA Vice President Ha Thanh Hang expressed aspirations for a more inclusive water sector in Vietnam. She highlighted the need for broader dissemination of such training programs and reaffirmed VWSA's commitment to advancing gender equality, diversity and social inclusion within the water and sanitation utility sector:

"In recent times, the field of clean water supply has achieved many positive results, but gender equality issues including support for disadvantaged groups in society has not yet met as many expectations as possible" –VWSA Vice President Ha Thanh Hang

The sentiment was echoed by General Director of Phu Tho Water Supply Company, Doan Thi Kim Quy, underlining the collective determination to foster a more inclusive environment:

"We would like to see this training offered to more water utilities in Vietnam and are committed to supporting the scale up of gender equality and inclusion capacity development in the water and sanitation utility sector". – VWSA Vice President Ha Thanh Hang.

"I firmly believe that Gender Equality, Diversity, and Social Inclusion (GEDSI) programs are not just initiatives; they are the very essence of progress in Vietnam's water sector. By embracing GEDSI, we not only ensure equitable access to water resources but also foster innovation, resilience, and sustainable development for all communities, regardless of gender, background, or circumstance. GEDSI isn't just about doing what's right; it's about empowering every individual to contribute their unique talents and perspectives towards a brighter, more inclusive future for Vietnam's water landscape" - General Director of Phu Tho Water Supply Company Doan Thi Kim Quy

Figure 45. GEDSI expert, Ms Pham Thu Hien delivered Gender Equality, Disability and Social Inclusion (GEDSI) training in Việt Nam in January 2024.

Charting the Path Forward

The training also featured presentations from Kirsty Jones, International Program Manager at AWA, who showcased examples of GEDSI initiatives from Australia. The session emphasized the many benefits of diversity and inclusion across customers, communities, and organisational innovation, outlined in Figure 12.

Figure 46. Business reasons for a more diverse and inclusive environment. Source: Tapping the Power of Inclusion and Diversity in Urban Water

Melita Grant (UTS-ISF) also discussed how GEDSI can be integrated into management, staff, and community levels. She highlighted research indicating that having more women on boards and/or in top leadership positions enhances firm performance (with a recommended minimum of 30% diversity).

Additionally, studies demonstrate that companies with a higher representation of women in senior leadership roles achieve better results.

Melita introduced a comprehensive framework for integrating GEDSI considerations at every level of the water sector workforce, drawing from the global initiative Equal Aqua. The framework encompasses recruitment, retention, and promotion strategies aimed at fostering an inclusive environment conducive to professional growth.

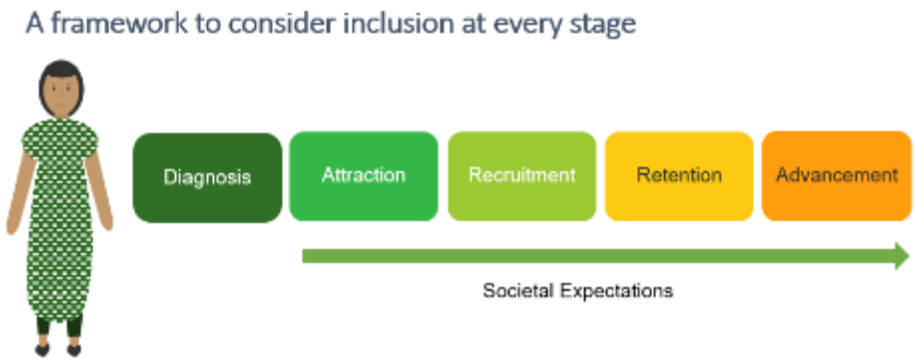

Figure 47. Framework to consider inclusion at every stage

Continuing the Journey

The GEDSI training journey continued beyond the face-to-face workshops, with a follow-up session conducted online in April 2024. Participants shared their experiences in implementing workshop insights within their respective organisations, underlining the ongoing commitment to driving positive change.

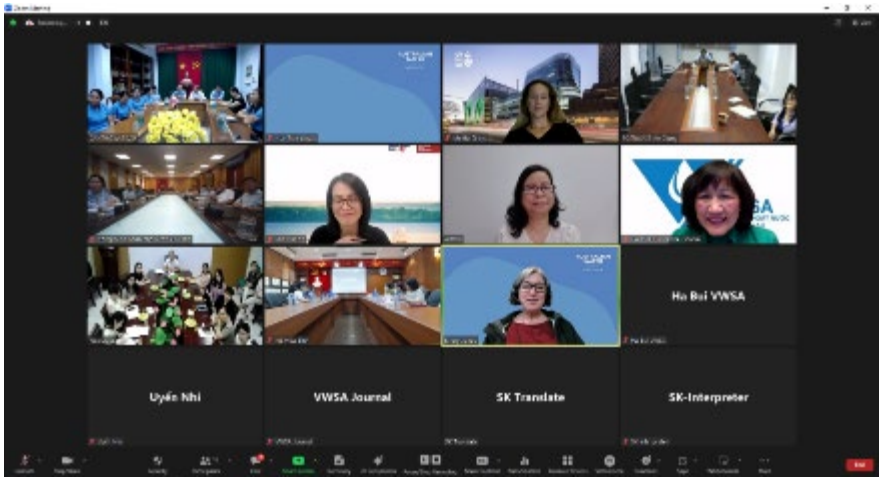

Figure 48. Online GEDSI workshop. Participants shared their experiences in implementing workshop insights within their respective organisations, underlining the ongoing commitment to driving positive change.

As Representative of the National Center for Rural Water Supply and Environmental Sanitation (NCERWASS), Duong Tu Oanh, remarked, initiatives like these signify a pivotal step towards a more equitable and inclusive water sector in Vietnam. Dr Huy Van Tran, Program Coordinator at AWA, emphasised the collaborative spirit driving such initiatives forward, marking a promising inclusion trajectory for Vietnam's water utilities.

10 Lessons learned for future evolution of the partnership program

The following table presents key lessons learned from the delivery of the Partnerships Program 2022 – 2024 as informed by the monitoring, evaluation and learning processes that were embedded in the program. The lessons learned are categorised in terms of program design, program delivery, feedback about program value, GEDSI and climate change related learnings. Each lesson learned is supported by evidence, as well as a response and recommendations which have been co-developed with AWA team.

Table 7: Table outlining lessons learnt from the partnership program

Lesson learned	Evidence base	Response and recommendations
Program design: The scoping period proved to be essential for the successful identification and matching of partners, as well as for addressing key issues. Most importantly, it allowed us to build strong relationships. Participants expressed the importance of co-design sessions on program goals and objectives at the start of the program to ensure everyone is on the same page.	Surveys, team reflection.	While a several-month scoping period may not be necessary for ongoing partnerships, it is essential for new partnerships to ensure that all preparatory work is completed and agreed upon before the actual partnerships commence. Recommend that future new partnerships follow a similar process of developing a shared understanding of the partnership over several months.
Program design and delivery: A range of issues and themes emerged across the partnerships of mutual interest and action. These included reducing water losses as a climate change adaptation (and mitigation) action; improving asset management; water quality management and improvements, modernising IT and billing systems; and GEDSI.	Surveys, MSC interviews, case studies.	In the future it would be beneficial to offer training and learning opportunities across key thematic areas of common interest. Developing communities of practice around these mutually relevant topics can foster knowledge sharing and collaboration. These could be based on topics such as: • Reducing water losses as a climate change adaptation and mitigation action, highlighting best practices and innovative solutions. • Improving asset management to enhance infrastructure reliability and efficiency. • Water quality management and improvements including water treatment options and catchment management.

		• Modernising IT and billing systems for better service delivery and customer satisfaction. • Develop training on integrating GEDSI principles into core business practices, engaging vulnerable communities, and promoting workforce diversity and inclusion. By focusing on these areas, partners can build capacity, enhance their operations, and address shared challenges more effectively. AWA could also tap into specialist networks to support further work around these themes.
Program delivery: Good facilitation and translation supports were a critical ingredient for program success – from AWA and also professional interpreters coordinated by AWA.	MSC interviews	Continue providing good quality translation by AWA and also by professional translators brought in for study tours and learning opportunities. Continue to track and promote the benefits and value-add of consistent and strong facilitation and program management by AWA.
Program design and delivery: Program partners from both Australia and internationally significantly increased the value of the overall program, and outcomes, through their generous in-kind co-contributions in the form of staff time and expertise, catering and logistics for study trips.	Data on number of people who were part of the program, the activities they participated in and testimonials.	It would be beneficial for AWA to develop a summary of the co-contribution provided by partners to the program, to support an assessment of value for money for the program (to compliment this evaluation).
Program design: Trusting friendships and personal connections are the common denominator across all partnerships. While it takes time to understand different cultures which is key to working together, the benefits are profound and, in many case**s,** resulted in long term connections.	Surveys, MSC interviews, observation	Cultural and GEDSI pre-departure training/discussions provided to participants were appreciated and could be enhanced in the future. Cultural training could be expanded beyond a single briefing session to a series of briefings to fully prepare participants before they travel. This is relevant for both Australian and international partners, so that international partners are better informed about Australian culture, ensuring a more balanced

		preparation for both Australians and their international counterparts.
Program design and delivery: Learning is fast, implementing changes can take more time, time though within one year, although some utilities have implemented pilots and new processes during the 18 months partnership. Deeper organisational change was in some instances commenced but will take time to be deeply embedded.	MSC interviews focussed on outcomes	Ideally, future programs should be set up for at least three years, in order to maximise on the relationship development, learning and implementation of learnings.
Climate change action: Climate change and disaster risk reduction activities were numerous and varied. All participants acknowledged the interconnections between reducing water losses and building resilience of the water utility itself, as well as reducing demand on water sources that are under pressure, impacted by climate change, or of poor water quality (high turbidity for example).	MSC interviews	Effective long-term planning and disaster risk reduction and management require strengthened asset management by water utilities in our region. Ensuring robust asset management is essential for a coordinated and effective response to emergencies. Non-Revenue Water (NRW)/water loss reduction has been found to be a relevant concern for all partners. Addressing NRW involves collaboration with various agencies and stakeholders, expanding methods of operation, sharing responsibilities, and conducting scenario planning. Monitoring water quality and improving water quality, including catchment management, emerged as a priority for future programs. Climate-resilient water safety planning represents a potential area for future partnerships and capacity building (as indicated by partners). The impact of deteriorating water quality is a significant concern, making it a high priority for all partners involved in the program.
Program design: Some participants said that they wished there was more time for the study tours and suggested that some longer-term options be included such as work placements/exchanges.	MSC interviews	Future programs could consider a range of options including longer work placements and executive twinning/partnerships as requested by partner organisations. A range of options need to be considered to take into account care roles that many staff have, especially women.
Program design and delivery: Future programs should build on enablers and successes such as high-quality support and	MSC interviews	To effectively communicate the clear benefits of the business to the Australian side, provide concise briefings

AWA facilitation, and management within partner organisations being on board and embedded in the partnerships to enable time for staff to participate. Having senior and middle management within partner organisations being on board to enable time for staff to participate is important, otherwise staff feel that they have to do the program in their personal time which can lead to stress and pressure. The merits of the partnership program (for both Australian and international participants) need to be shared, informed by this evaluation.		to the executive team. Ensure that at least two executive-level individuals sign off on the plan to maintain continuity in case one leaves. Consider integrating an executive-to-executive component into the program, facilitating a dialogue between Australian and international executives at least once during the program. This should be explicitly written into the agreements. AWA should ensure that Australian utility members are made more aware of the benefits of the program and continue to communicate these advantages clearly and more frequently to middle managers so that they remain supportive of their staff engaging in the program. Explore the WaterAid design challenge, allowing employees to dedicate a certain number of hours per week to work on related projects. Incorporate this into their work and performance plans. Consider financial subsidies for Australian utilities, extending beyond in-kind contributions. Review how the Dutch government has handled similar situations to gain insights. Future programs could also build on the connection between all of the partners across the program so they can learn from each other. One way of doing this could be to use AWA Communities of Practice platform.
Program design: Having a consistent connection between organisations (facilitated by AWA), and longer-term partnership span is needed for implementation outcomes to be fully realised. Future programs should be set up for at least three years, in order to maximise on the relationship development, learning and implementation of learnings.	MSC interviews, Ozwater engagement and presentations	AWA to seek funding for the program for a minimum of 2-3 years so that initiatives have time to be fully implemented. The monitoring, evaluation and learning for the partnership program demonstrates that learning and design has occurred, and partners are now ready for implementation – longer term engagement is important rather than

		just starting new partnerships. Longevity of the programs helps to reduce the potential for burn out.
GEDSI: Gender equality, disability and inclusion (GEDSI) actions delivered were appropriate and successful, and now that partnerships are further developed, more GEDSI activities could be incorporated into future phases of the program based on the identified needs of partners and the most useful ways of working in each context, informed by local GEDSI partners and experts. In Vietnam, the VWSA has publicly stated that they would like to see the GEDSI training rolled out to more water utilities across the country, and feedback was extremely positive from participants.	MSC interviews, GEDSI training	Utilities are open to and prepared for GEDSI training, pilot initiatives and support. This training should link GEDSI principles to their core business functions, such as engaging vulnerable communities, enhancing resilience, and strengthening the future workforce, particularly by focusing on youth. Connecting GEDSI issues to their customer base is a natural entry point, as it supports customers and correlates with revenue generation. A focus on GEDSI within the workforce/utility/association is also warranted. The program has demonstrated that establishing trusting relationships is a necessary precursor to implementing GEDSI initiatives that make a tangible difference. Women involved in the program are well positioned to advise on relevant and impactful GEDSI activities for future phases, particularly in regions like Indonesia, Tonga, and the Solomon Islands. Future GEDSI planning should build on the successes of the current phase, especially in Vietnam. Supporting individuals within the organisation who can inform and champion these initiatives is essential.
Program design and delivery: The partnership program has significantly enhanced the confidence and career development of both Australian and international participants. This includes improvements in technical skills, public speaking, and the advancement to more senior roles by showcasing leadership abilities.	Surveys, MSC interviews, observation	To maximise future benefits, it would be advantageous to link the program to YWPs initiatives and encourage their involvement. Rather than creating separate offshoot programs, it is more effective to build the capacities of associations to deliver these programs. Strengthening capacities at the national or regional level will ensure a more sustainable and impactful approach to developing YWPs.

Program feedback about value: Increased engagement was observed across and within Australian water utilities, fostering better understanding of diverse roles within the organisations and promoting coordination and morale. As a result, regular cross-organisational sharing has begun in some Australian utilities, influenced by insights gained from the partnership program.	MSC interviews, Ozwater engagement and presentations	AWA to draw on these insights about benefits to Australian partners and provide that to Executives so that the value of the program is well understood.
Program design: Would be useful to simplify and translate some of the Australian standards and guidelines, such as those produced by the NSW Water Directorate into different languages based on partner needs.	MSC interviews	Simplifying and translating Australian standards and guidelines, such as those produced by the NSW Water Directorate into different languages based on partner needs would be highly beneficial. Engaging with the Water Services Association of Australia (WSAA) and other relevant bodies can help facilitate this action. Translation in terms of both language and relevance requires significant time and effort. Designated funding is necessary for this initiative, and it is important to consider costs and intellectual property issues. Regular updates and reviews of guidelines must also be factored in to maintain their relevance and accuracy, along with considering long-term cost implications. Another area for future growth could be for AWA to match partners with formal training opportunities. This could include connecting with the International Water Association (IWA) or the International Water Centre (IWC) to expand training and development opportunities for partners, including related to leadership capabilities.
GEDSI: The program achieved a good gender balance in terms of the people selected to be part of the program and those taking part in study tours, conferences and other opportunities for people to be showcased and shown as role models (for example the videos, social media posts, and newsletter	Quantitative data, videos, newsletters, social media	In the future, clear explanation and guidelines about selecting participants should be provided to participants so that choosing women, people with disabilities, and young people are intentionally prioritised, and at least

stories). Approximately 33% of participants were female, with far exceeds the gender parity within most water utilities internationally.		50% of participants are from these groups wherever possible.
Program delivery: The "people-people" connections developed through the program are indisputable and have been life changing for many participants. As a diplomatic contribution, the program has exceeded its goals because of the generosity of the individuals and their organisations involved in the program.	MSC interviews, Ozwater engagement and presentations, surveys	AWA to share monitoring and evaluation report, newsletter stories, social media posts with DFAT Posts, DFAT Canberra, the AWP and other key funders relevant to the program so that the benefits and approach of the program can be widely known.
Program design and delivery: Where several Australian organisations/donors are involved with the same water utility or association, it would be beneficial for occasional meetings to be held together to discuss collaboration and support the international partner to coordinate assistance.	Observation	Encouraging greater collaboration between key players in the partnership/twinning programs, water utilities, YWPs and capacity-building initiatives is essential. This can be achieved by fostering strong partnerships and open communication channels among all involved parties. It is important to support international partners in coordinating different donors and players to minimise overlap. Empowering these partners to manage multiple supports, donors, and programs will enable them to make informed decisions about their collaborations and operational methods. By enhancing coordination and collaboration, international partners can more effectively streamline efforts, leading to more efficient and impactful outcomes. This approach ensures that resources are optimally utilised and that programs are tailored to meet the specific needs of the communities they serve.

"Loved it – amazing opportunity and I will apply again. I believe both utilities were able to apply an improvement to their area of the business."

– Australian Water Utility Partner

"I would like to thank AWP for funding and making this program possible and [our Australian water utility partner] for taking out their time to share their knowledge, processes and experience with our Team."

– Pacific Water Utility Partner

11 References

For a full list of communications developed throughout the program, please see Annex 2.

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12 Annex 1. Analysis of pre and post study tour surveys and micronarratives

The following information provides analysis of the surveys before and after each study tour. The high-level findings have been incorporated into the MEL report above.

Study tour 1. May 2023

Total pre-surveys: 19; Total post-surveys: 15

Surveys show that people involved in the study trips found the experience to be positive and many specific learnings were reported by both Asia-Pacific and Australian partners.

Asia-Pacific utility partners reported the following highlights that they experienced from the study tour.

- Site visits
- Technical information related to specific challenges/issues
- Hospitality and friendliness of Australian water utility partners
- Professionalism of Australian water utilities and organisational structures.

Australian utility partners reported the following highlights that they experienced from the study tour.

- Hospitality of partner organisation
- Opportunities to learn about culture
- Site visits – seeing things that are similar in both contexts
- Being a host and showing delegates the Australian context
- Learning about specific technical areas of mutual interest e.g. water treatment processes and solar farms
- Seeing the level of engagement, conversations and note taking from the members of the [the partner utility] during and post presentation
- Building relationships and in-depth discussions with utility and association partners
- Conversations around the complexities of disasters that partner utilities have faced with Australian water utility operational representatives was considered invaluable.

In terms of what people suggested should be changed/done differently, the main suggestions that have come through were:

- Would like more time – felt like a lot to cover in three days.
- Simplify some of the Australian standards as they are complex (from an Australian participant).
- Provide Australian partners with schematics of the Asia-Pacific partners' systems to understand how everything works and leverage off that prior knowledge to save time (from an Australian participant).
- One person would have liked more site visits (A-P participant)
- More intensive training (A-P participant)

Pre study tour analysis (October 2023)

Number of respondents: 36 (18 Aus, 18 A-P)

Table 8: Pre study tour analysis (October 2023)

Learning interests and needs in relation to the program.		
Subgroup	**Themes**	**Description**
Asia Pacific	Water loss prevention	• Want to learn more about water loss prevention and saltwater intrusion.
	Operational efficiencies and water supply network	• Debt recovery • Improving billing accuracy • More knowledge around water supply network management, water quality network and network modelling.
	Customer engagement	• Improving communication/public relations with customers • Engaging with customers on bill payments
	Communication technology	• Improving communication technology for stable connection
Australian	Climate change	• Cyclone preparedness • Disaster risk reduction
	Asset and data management	• Asset management strategies • How to prevent leaks and bursts • Know more about pressure management. • Learn more about data management and field testing
	Knowledge sharing	• Knowledge sharing on water quality, asset management • Transferable skill sets • Perceptions around drinking water
	Leadership skills	• Interested in improving the leadership skills. • Lead teams by facilitating discussions, providing guidance
Thoughts around using learnings from the program in their current role(s)		
Asia Pacific	• Using the knowledge gained in the program to better manage and deliver assets. • Using the knowledge gained in the program to manage NRW issue	
Australian	• Look for better ways to improve leak management. • Improve on skills like leadership at the company	
Quotes		
"I think this is a fantastic opportunity to work with other water authorities." *-Australian partner*		
"It is extremely rewarding working with likeminded teams striving to improve the supply of safe drinking water to communities and the related Long-term health benefits these improvements bestow." *-Australian partner*		
"This twinning program is an excellent platform where information and technical know-how is shared, and problems are addressed. It is an amazing platform, and it should be continued especially for utilities in the Pacific" *-Asia Pacific partner*		

"I am very happy and satisfied with the program especially since I had learned so many new things during our study tour. I hope the program will continue on so that all Utilities can learn from each other" *-Asia Pacific partner*
"Good learning experience for both parties" *-Australian partner*

Post study tour analysis: December 2023

We received 33 responses to the post study tour: 6 from Asia, 14 from the Pacific, and 13 from Australian utilities.

Table 9: Post study tour analysis: December 2023

Highlights and learning exchanges from the trip		
Subgroup/Partner	**Themes**	**Description/excerpts**
Australian and Pacific	**Opportunity to collaborate (externally and internally)**	• Opportunity to collaborate and discuss common project issues and solutions. • Teamwork and opportunities to exchange ideas. • Opportunities to share knowledge and skills • Encouraged internal networking to address silos
Australian and Pacific	**Improved understanding of culture**	• Broadening of cultural experience. • Improved awareness of social and cultural factors •
Asia	**Improved understanding of technical and operational processes**	• Pressure management • Wastewater management • Sewage water treatment plant management • Non-revenue water management • Cash to meter process • Operating pumps
Australian	**Improved understanding of climate change impacts on water**	• Impacts of changing climate on water sector as a whole • Disaster risk (for Solomon Islands and salinity issues) • Impacts of changing climate on water reliability • Economic burden on customer due to climate change impacts • Impacts of climate change on water supply in Pacific islands
Pacific	**Improved understanding about the emergency procedures and management**	• Communicating during emergencies • Risk and resilience • Understanding about disaster preparedness
Asia	**Technology application**	• Use of GIS, drone for surveys and pressure management • Use of Scada for water quality

		• Need for upgrading traditional systems with new technologies
Asia	**Customer service**	• Learning more about importance of customer service • Customer data/segmentation
Applying learnings from the program in the current role		
Pacific & Asia	**Informing strategy and policy**	• Applying lessons learnt in developing strategies to address challenges. • Applying lessons learnt in developing policies on guidelines on water quality control, water loss and asset management
Australian	**Integrating climate risk in water network management**	• Applying the lessons learnt in managing impacts of climate change on water network. • Applying the lessons learnt in infrastructure planning and design
Australian and Pacific	**Feedback through knowledge sharing**	• Sharing knowledge from the program through formal presentations • Sharing knowledge from the program with local leadership teams
All partners	**Improving current ways of working**	• Improving current routines and schedules for employees • Training staff on incident reporting • Adopting ways to optimize water usage. • Using the knowledge gained to become a better leader. • Replicating lessons learnt to improve communication campaigns with focus on vulnerable local communities. • Improving current codes and standards
Pacific	**New project identified**	• Three new projects identified to monitor financial resilience and data
Recommendations for change		
All	**Program continuation**	• All partners have recommended extending the program extends beyond the current time period.
Asia	**Extending support beyond the program**	• Extending support to rural water supply companies in Vietnam • Extending support to improve water supply services in other provinces of Vietnam
Australian & Pacific	**Program design**	• Shorter length would be better. • Reviewing attendees beforehand
Quotes		
Australian	*"I believe that this is a good model especially if there is an ongoing relationship rather than a one-off program. This approach to build capacity rather than building physical infrastructure is very beneficial"*	

Australian	*"Very positive. Win-win situation. Positive impact on climate change issues which we know will become more and more prominent. Grateful to be able to put my skills to good use in an international context. Our partners are now also helping other authorities in their country, so the program has a 'ripple' effect which is great"*
Asia	*"The study tour gave me a good chance to understand about 0&M activities in Australia as well as the strict regulations on controlling water quality, water service and protect the water resources. Besides, creating a friendly and comfortable working environment also play an important role to achieve working efficiency. We highly appreciate the hospitality of Riverina Water, especially the CEO, the directors and their staffs. They are very friendly and always ready to answer any questions from us"*
Pacific	*"This study tour offered identification of loopholes & issues and how to execute those issues"*
Australian	*"Thank you so much to AWA for organising the partnership program. Appreciate the effort that goes into coordinating this"*
Australian	*"It was an amazing opportunity, and I am very grateful for it. Being able to meet face to face with our partners was definitely a massive boost for the program. It has strengthened links and enabled to better get the information across"*
Pacific	*"Win-win situation for both utilities"*

Pre study tour analysis (March 2024)

Summary

The analysis has helped to clearly identify following three main/strong themes that have been the key focus areas for the participants:

1. Improving customer service and business processes
2. Management of climate related risks, preparedness and adaptation
3. Overall operational risk management

Table 10: Pre study tour analysis (March 2024)

Highlights and learnings from the pre study tour		
Topics	**Themes**	**Descriptions**
	Improved understanding about water issues and their management	• Understanding metering, leak detection, water loss management • Management of non-revenue water losses
	Asset management	• Asset management approaches and processes • Asset management of solar farm and BESS
	Customer service and billing processes	• Learn ways to improve customer service • Learn about meter to cash process, types of meters or app used.

Learning goals		• Interested in improving processes focusing on connecting customers to their homes with the sewerage connection
	Climate change adaptation	• Want to improve understanding about climate resilience and adaptation. • Climate risk and resilience planning • Improve knowledge about renewable energy and energy management more broadly
	Improving efficiencies	• Interested in understanding GVW's technology used to improve service deliveries and job efficiencies
Application of knowledge/skill learnt during the tour	Leadership and business improvements	• Improving awareness of business • Using the knowledge gained to improve organisational strategies. • Improve strategic planning processes. • Develop good business case for Solar and BESS
	Climate change awareness	• Enhance climate change awareness and collaboration to address issues arising due to climate change. • Improve preparedness to climate induced unforeseen incidents arising in future.
	Customer engagement	• Focus on making the culture customer centric, improve customer relationship and behavior. • Customer Data integrity, Customer segregation, Improve customer services processes. • Use the knowledge gained in the tour to promote organisational policies and programs to customer. • Use the knowledge for technological advancements to improve service delivery and customer satisfaction
	Improvement of internal operational processes	• Assess and improve the traditional ways of operating in the organisation. • Improve asset management plans • Use the knowledge to improve internal SOPs and emergency management frameworks
	Risk management	• Improve risk management by focusing on better utilization of resources
	Organisational structure and business	• Keen to learn about the organisational structure, skill sets, their available resources (plant, tools, equipment) • Interested in engaging and learning about operations and maintenance workflows. • Understand the business model of (partner utility) in a holistic way to implement learnings in their own organisation

Interests and needs	Technical knowledge related to water	• Want to learn about water quality testing. • Interested in learning about the GVW water treatment plant, pipe installation planning • Operational aspects of water supply system
	Climate change impacts and related risks	• Learn more about the climate change induced impacts • Learn about climate resilience planning and preparedness. • Keen to know more about the Climate Resilience Project that (our partner org) is involved in • Gain knowledge around how to manage climate related operational risks
Feedback on the partnership program	Opportunity to share knowledge and awareness	• Shared knowledge and awareness on climate change • Understanding how to navigate language barrier • Shared opportunities to develop understanding about water
	Opportunity to learn and develop	• Opportunity to learn and develop skills and technical knowledge. • Opportunity to explore development opportunities
	Inspiring and motivational	• Participants found this program very motivational and inspiring.
Quotes		
"The value that this partnership brings is worth more than just the period of this partnership. Great stuff"		
"This is a great opportunity that we can leapfrog any development in --- because we can learn from ---- successes and apply it to --- on our scale"		
"It has been very beneficial to my own learning & understanding what is the best way to share knowledge, especially with the language barrier that we are navigating"		
"This partnership has enabled me to become more confident in myself both professionally and personally. I have become a better public speaker and recognition within my company"		
"So far it's been a great program to share knowledge and we've really enjoyed the program. We've learnt a lot about the Vietnamese culture and it highlighted that we don't often do enough knowledge sharing across the organisation"		
"Appreciate the opportunity to share knowledge and experience with like-minded professional and dedicated people"		

Post study tour analysis (March 2024)

Summary

The analysis has helped to clearly identify following three main/strong themes that have been the common across all respondents:

- Improved knowledge and awareness on water management, climate change issues and risks and operational risks
- Shared knowledge around asset management within the organisations
- Self-reflection, appreciation about teams, personal development from leadership point of view

Table 11: Post study tour analysis (March 2024)

Highlights and learnings from the pre study tour			
Topics	**Themes**	**Descriptions**	**Subgroup/partner**
Trip highlights	Knowledge exchange on operations and other processes	• Learning about the different systems that are being used by --- in their operations and their administration. • Learn and understand the process and of operating and Water treatment Plant • Learn about the unique challenges and similarities in processes, people, systems and tools	Pacific
	Focus on wastewater management	• Impressed to see how ----- manages wastewater equally as much as the fresh water. • Focus of Australian government on wastewater as well as fresh water	Asian
	Relationship and capacity building	• The program has not just helped build capacity in the areas of development but also created valuable partnerships in similar counterparts. • Generated new friendships	Pacific
	Improved technical knowledge around water management and operational challenges	• Protecting raw/fresh water sources from pollution to maintain the quality. • ---- approach to manage leakage by ensuring appropriate placement of main pipe network. • Conservative approach adopted by ----Water to manage future demand from their treatment plant. • Application of technology to manage treatment plant by ----	Asia
		• Challenges faced by ---- to manage debt and missed bills issues arising due to financial hardships.	Australian

Learning outcomes		• Other challenges faced by ------ include fixing broken assets on behalf of property owners due to natural events.	
	Improved knowledge around asset management and new systems	• New learnings about asset management process • Solar system integration with pumping operations to optimize solar consumption. • New systems like the call systems used to record calls for future reference.	Australian and Pacific
	Safety protocols when working with Asbestos and Chlorine	• Safety protocols used in Australia when working with Asbestos & Chlorine	Pacific
	Self-reflection and appreciation	• Realized how great the team is. • Better understanding of the current organisation • Self-reflection made to realize that one has gotten better at delegating and making room for others to shine	Australian
Application of knowledge/skill learnt during the tour	Problem solving and finding solutions	• Focusing more on finding right solutions • Focusing on finding the most effective and simple ways to solve problems.	Asia & Australia
	Climate change issues and risk assessment	• Approaching climate change issues in a more collaborative manner • Focus on improving climate preparedness and managing risks	Australia & Pacific
	Asset management, policy review and systems	• Learnt about asset register and willing to implement that process during recruitments. • Implement the leanings from the program to review and improve current policies, customer engagement programs and customer charter. • More confident about the knowledge required to implement renewable systems and energy assets across the network. • New learnings around IT systems, GIS and SCADA	Australia & Pacific
	Mindset shift and personal development	• New appreciation about discipline, hard work and time • Appreciation for the different challenges everyone experiences and	Asia & Australia

		the differences between mindset and approach. • Working on leadership skills to be a better leader for the team and allowing the team to work on projects and tasks they are passionate about	
Benefits and key takeaways from the tour	Field level connections	• Benefitted from the information shared directly with officers on field. • Field visits were key to enhancing the knowledge and learnings.	Asia
	Shared knowledge in the operational as well as climate change issues	• Improved knowledge and understanding on climate related issues and the associated operational risks. • Firsthand experience of understanding the operations of a wastewater treatment plant was beneficial	Pacific and Asia
	New relationships and new learnings about other cultures	• Develop meaningful relationships outside of the program. • Learnt about new cultures and different approaches that exist to deal with similar problems	Pacific
Feedback or suggestions for improvement	• More time spent with partners. • Debriefing session at the start of the program to ensure everyone is on the same page. • More in-person time could be beneficial. • Learning material was very useful		Asia Pacific All

Quotes
"What was highlighted for myself was how much alike we are, I was able to share my knowledge and experience from my current position." *-Australian Partner*
"Realising that the knowledge I've gained working in the water industry is of immense value to the ----Water utility to help them manage their critical assets, as well as plan, respond and recover to the impacts of climate change and other natural disasters. Experiencing a Pacific Island culture was also immensely interesting and rewarding." *- Australian Partner*
"I learned about the partnership program and the way it benefits both --- and ----. This partnership program is best fit for capacity building, sharing of experiences and exchanging of ideas" *-Pacific Partner*
"I will put all the new things I learned from this program to work on solutions when we are planning and building the future" *-Asia Partner*
"It benefitted us so much when we can come to see the conditions and shared many information with officers in the field directly, we got much more clear insights & knowledge, and gain so much information compared from reading or online meeting" *-Asia Partner*
"Definitely applying these new learnings to my role as the IT Coordinator for ---. I look after IT and GIS and therefore applying these new learnings in terms of IT systems, GIS and SCADA will be huge for ----" *-Pacific partner*
" I was able to develop relationships outside of this program. I met good people that are very experienced and learn to understand people behaviors." *-Pacific* partner

Micronarratives - 2023

Table 12: Detailed analysis of the Micrconarratives

Question 1: What is the biggest benefit you have experienced from the partnership program so far?	
Themes	**Short description/sub themes/common terminologies**
Developing new connections	• Developing new connections within the same business • Increased engagement across all levels of the organisation (includes engagement with executive level) • Networking and new connections with other associations
New learnings	• About smart water meters and other operations around pressure management • About mitigating water losses and improved efficiencies • Learning from experts • Opportunity to improve skill sets. • Technical knowledge around range of technical and operational areas • New tools, concepts and approaches • International development • Other operational aspects like billing, debt recovery etc.
Deeper understanding	• Issues related to climate change and sea level rise • Impact related to climate change and sea level rise

	• Challenges arising due to disaster risks • Of the current roles (individual role in the organisation)
Positive feelings	• Life changing experience • Opportunity to be of use to other less developed countries. • Excited around new circle of friendship
Knowledge sharing and information exchange	• Exchange of knowledge on cultures • On Non-revenue water (NRW) • Technical aspects around driving efficiencies within the system
Great quotes	"Learning from experts and how business is done in a developed country and the learning skills that can help pacific countries improve their service." - *Pacific partner* *"*Exposure to a different culture in a professional environment. Open-mindedness and emotional intelligence. Feeling useful by sharing knowledge" - *Australian partner* "Building of relationships with others in the business; opportunity to demonstrate leadership capabilities; understanding my technical role from a different lens." - *Australian partner* "I gain a new insight and knowledge through group discussion, references sharing during this program. New circle of friendship and networking also be a good benefit to both utilities." - *Asian partner* "This has been a great opportunity for myself to learn and improve my skill set. I have been able to determine differences not only between processes with another water company but also culture." - *Australian partner*
Question 2: Is there anything you would change about the partnership program?	
Longer duration of study tours	• Longer study tours • More time to prepare for study tours • More time to study the approaches and thought processes of other utilities • More time to map out processes and systems
Enhanced focus on certain topics	• Other topics like, lifecycle of solar projects than asset management plan only • Utility participation • Identifying opportunities to fund more participation in the program
Future prospects	• More clarity from the utility partners on the needs and wants • Scaling opportunities in other water utilities in Vietnam

Great quotes	*"No - I highly recommend this project to continue as we have witnessed the impact of overseas involvement in helping us grow and improve the way we do things"* *-Pacific partner* *"Overall, very well set up and facilitated by AWA well done. I would allow more time for preparation before the first study tour as it was short notice in this instance"* *-Australian partner* *"We want this program to continue for other themes"* *-Asian partner* *"No but it will be good to have twinning programs with Utilities that are similar in setting with our Utility. This is so that we can apply the learnings from the partner utility at our utility"* *-Pacific partner*
Question 3: How would you describe your role in the partnership program? If you chose other, what is this role?	
Support role	• To provide support to the internal staff to ensure learnings from the twinning program are implemented
Collaborator role	• To ensure goals are achieved for all parties participating in the program
Administrative capacities	• Administrative support to ensure learning and sharing to solutions
Mentor role	• To guide setting up of processes to ensure quality in asset construction
Other roles	• Technical lead, Executive support for solar projects
Question 4: What do you think is the most important contribution participants and/or AWA can make to ensure the success of the partnership?	
Tracking of actions	• Ensuring actions and learnings from this program are implemented. • Measuring outcomes
Identifying and measuring the Indicators for success	• Commitment from partners • Clear understanding of issues and causes • Implementation of action plans/learnings • Long term support and partnership for shared learning
Communication	• Keeping up the momentum through continued communication • Communication within teams responsible for implementing the actions/learnings from the program.
Training and capacity building	• Training and upskilling of the staff • Improving knowledge of the staff
AWA' s role	• AWA to own the program to ensure this program remains a priority in the coming years • Program extension for another year
Feedback exchange and knowledge sharing	• Sharing knowledge beyond the extent of the program • Sharing of success stories from the program through conferences and other platforms • Providing feedback to the facilitator for continued improvement

Quotes	*"I think the most important contribution is the training and upskilling of staff that are directly related to the target outputs"* *-Pacific partner* *"I think the most important for participants is to remain open-minded, and to dedicate sufficient time to the program (it can sometimes be hard to juggle with other work commitments"* *-Australian partner* *"The outcomes of the action plan that can be achieved are a measurement for how successful the program is"* *-Asian partner* *"The execution. Interactions/planning is great, the implementations and the final outcome will be the success of the program"* *-Australian partner* *"AWA is doing great in this partnership and but, if possible, to try to extend the program for another year we want to see outcome of the implementation and the impact to the organisation"* *-Pacific partner*

13 Annex 2: Communications outputs

The table below outlines key documentation and evidence from the program, indicating where the evidence relates to Association to Association, Utility to Utility, Association to Utility, or GEDSI outcomes.

Content Type	Title	Platform	URL	Association to Association	Utility to Utility	Association to Utility	GEDSI
Across Program	Hero Video	YouTube	https://www.youtube.com/watch?v=V76rLn0KZNI	x	x	x	x
Across Program	Water association partnerships accelerate shift to climate smart and resilient water sectors in the Asia-Pacific	AWA Website	https://www.awa.asn.au/resources/latest-news/water-association-partnerships-accelerate-shift-to-climate-smart-and-resilient-water-sectors-in-the-asia-pacific	x	x	x	x
Across Program		FB Post	https://www.facebook.com/australianwater/posts/pfbid0Gffv1Z6EQQATwsDRx8PjvSezxckrSgTswgkP7omb81zpYcxBLGgQnGHv8H9FnMAbl	x	x	x	x
Across Program	Partnerships for a resilient and climate smart water sector	AWA Website	https://www.awa.asn.au/resources/latest-news/partnerships-for-a-resilient-and-climate-smart-water-sector-international	x	x	x	x
Across Program	Uniting for Climate-Resilient Water Solutions Across Our Region	AWA Website	https://www.awa.asn.au/resources/latest-news/uniting-for-climate-resilient-water-solutions-across-our-region	x	x	x	x

Across Program	International Development Program	AWA Website	https://www.ozwater.org/program/international-development-program	x	x	x	x
Across Program		LinkedIn Post	https://www.linkedin.com/feed/update/urn:li:activity:7079352657139675136	x	x	x	
Across Program	Water Links Forged	watercareer.com.au	: https://www.watercareer.com.au/archived-news/water-links-forged		x	x	
Across Program	Post WWF Bali May 2024	LinkedIn	https://www.linkedin.com/company/412136/admin/feed/posts/	x		x	
Indonesia/Australia	Giri Menang/TasWater Outbound 2 AWA 1	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterassociation-awainternationalprogram-activity-7130064384692809728-bsYB/?utm_source=share&utm_medium=member_desktop	x	x	x	x
Indonesia/Australia	PERPAMSI, Tirta Musi and Yarra Valley Water 1	LinkedIn	https://www.linkedin.com/posts/australian-water-association_it-is-an-opportunity-to-learn-and-develop-activity-7178904201874321408-y6uL/?utm_source=share&utm_medium=member_desktop	x	x	x	
Indonesia/Australia	Tirta Musi/Yarra Valley Outbound 2 1	Instagram	https://www.instagram.com/reel/C0JfpXpyUa6/?igshid=MTc4MmM1YmI2Ng%3D%3D	x	x	x	

Indonesia/Australia	Tirta Musi/Yarra Valley Outbound 2 2	Instagram	https://www.instagram.com/p/C0JWeenP6cN/?igshid=MTc4MmM1YmI2Ng%3D%3D&img_index=1	x	x	x	
Indonesia/Australia	PERPAMSI: Direktur Eksekutif PERPAMSI Agus Sunara, Tenaga Ahli Dr. Subekti, dan Kepala Biro Penyehatan PDAM Risma Apriandy 2	Instagram	https://www.instagram.com/p/CzSsYc9PmRY/?igshid=MTc4MmM1YmI2Ng%3D%3D&img_index=1	x	x	x	
Indonesia/Australia	Tirta Musi and Yarra Valley Water Teaser 3	LinkedIn	https://www.linkedin.com/feed/update/urn:li:activity:7176367474077044737/	x	x	x	
Indonesia/Australia	Tirta Musi Visit to Yarra Valley Water 4	LinkedIn	https://www.linkedin.com/posts/david-gavin-171210103_another-amazing-week-hosting-our-indonesian-activity-7169090829628755968-H6ti/?utm_source=share&utm_medium=member_desktop	x	x	x	
Indonesia/Australia	Tirta Musi visit to Yarra Valley Water 5	LinkedIn	https://www.linkedin.com/posts/australian-water-association_watersector-climatesmart-partnershipsforresilience-activity-7170240051912585216-ZA_2/?utm_source=sh	x	x	x	

			are&utm_medium=member_desktop				
Indonesia/Australia	Tirta Musi visit to Yarra Valley Water 6	LinkedIn	https://www.linkedin.com/posts/yarra-valley-water_climatechange-activity-7170291387681243136-G9kR/?utm_source=share&utm_medium=member_desktop	x	x	x	
Indonesia/Australia	Tirta Musi and Yarra Valley Water 7	LinkedIn	https://www.linkedin.com/posts/yarra-valley-water_worldwaterday-sustainabledevelopmentgoal-activity-7176699091853221888-f0uq/?utm_source=share&utm_medium=member_desktop	x	x	x	
Indonesia/Australia	Giri Menang visit to TasWater 5	Facebook	https://www.facebook.com/permalink.php?story_fbid=pfbid02CDZtx7m8CYcPP7QKGJiWi2N9rRDiBGxeheXK5RVCMYWbq2MtMks438rSLddnohHfl&id=100069960546337	x	x	x	
Indonesia/Australia	Giri Menang visit to TasWater 6	Facebook	https://www.facebook.com/permalink.php?story_fbid=pfbid0ygmtPMzyu2CdYMdnQZ8zTFoWw1at9wHVeigsvfLNmpCfMSSMXtwD35178MM471Bul&id=100069960546337	x	x	x	
Indonesia/Australia	Giri Menang World Water Day Video (incl. footage of TasWater visit) 7	YouTube	https://www.youtube.com/watch?v=PwrHMiI1iUI	x	x	x	

Indonesia/Australia	Giri Menang/TasWater 2	Instagram	https://www.instagram.com/reel/CzOHCUqh0Y-/?igshid=MXI2Y2ltYjZ2Y3lydA%3D%3D		x	x	
Indonesia/Australia	Giri Menang/Tas Water 3	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterassociation-awainternationalprogram-activity-7060115922098802688-uRZ8/?utm_source=share&utm_medium=member_desktop		x	x	
Indonesia/Australia	Giri Menang visit to TasWater 4	LinkedIn	https://www.linkedin.com/posts/australian-water-association_taswater-and-giri-menang-indonesia-building-activity-7174167037416476674-nUvv/?utm_source=share&utm_medium=member_desktop	x	x		
Indonesia/Australia	Interview on ABC Radio with Catherine (TasWater) - starts around 01:06:08:	ABC Radio	https://www.abc.net.au/listen/programs/hobart-evenings/evenings/103064718		x		
Indonesia/Australia	Building more resilient and climate smart water utilities	AWA Website	https://www.awa.asn.au/resources/latest-news/awa-taswater-giri-menang	x	x	x	x

Pacific/Australia	PWWA Newsletter June 2023	PWWA Newsletter	2nd Quarterly Newsletter 2023 April 01-June 30 2023 FINAL FINAL.pdf: 2nd Quarterly Newsletter 2023 April 01-June 30 2023 FINAL FINAL.pdf	x	x	x	x
Pacific/Australia	Solomon Water/Boulburn Valley Water Case Study 1	AWA Current Magazine	https://australianwater-my.sharepoint.com/:b:/g/personal/zrudge_awa_asn_au/Edkkjy_uTcBAo3T4SzvwLA0BaKIsiaJYPE5VMHlUvKPGPg?e=TzvBl0	x	x	x	
Pacific/Australia	PWWA, Tonga WB and Solomon Water Campaign Teaser 1	LinkedIn	https://www.linkedin.com/posts/australian-water-association_tongawaterboard-solomonwater-activity-7178149266509508608-sgu3/?utm_source=share&utm_medium=member_desktop	x	x	x	
Pacific/Australia	Solomon Water/ Goulburn Valley Water Teaser 3	LinkedIn	https://www.linkedin.com/posts/australian-water-association_sustainablewaterforall-climateaction-australianwaterassociation-activity-7175287870138585089-szie/?utm_source=share&utm_medium=member_desktop	x	x	x	
Pacific/Australia	PWWA Newsletter Sept 2023	PWWA Newsletter	3rd Quarterly Newsletter 2023 July 01-September 30 2023 (FINAL).pdf	x	x	x	

Pacific/Australia	Solomon Water/ Goulburn Valley Water 2	Shepparton News	https://www.sheppnews.com.au/news/goulburn-valley-water-and-solomon-water-build-new-partnership/		x	x	
Pacific/Australia	Solomon Water visit to Goulburn Valley Water 4	LinkedIn	https://www.linkedin.com/posts/mark-mitchell-rpgeo-hydrogeology-b5634235_over-the-last-week-goulburn-valley-water-activity-7174571553269903360-vxMU/?utm_source=share&utm_medium=member_desktop		x	x	
Pacific/Australia	Solomon Water /Goulburn Valley Water - World Water Day 5	Facebook	https://www.facebook.com/SolomonWater/posts/pfbid0mDoaDhex6Ci914NtUM6g32B58LbJPQ8kYpd6hXCCT3bhi65RubpWdJGc5NMatY7Ll		x	x	
Pacific/Australia	Solomon Water/Goulburn Valley Water - WIOA Conference 6	LinkedIn	https://www.linkedin.com/posts/goulburn-valley-water_congratulations-to-our-team-representing-activity-7171362348480356352-KfBs/?utm_source=share&utm_medium=member_desktop		x	x	
Pacific/Australia	Tonga Water Board/Unitywater 1	LinkedIn	https://www.linkedin.com/feed/update/urn:li:activity:7172831249819009024/		x	x	
Pacific/Australia	Tonga Water Board/Unitywater 2	LinkedIn	https://www.linkedin.com/posts/unitywater_waterpartnership-australianwaterpartnership-activity-7176805518198415360-		x	x	

			MImu/?utm_source=share&utm_medium=member_desktop				
Pacific/Australia	Tonga Water Board/Unitywater 3	LinkedIn	https://www.linkedin.com/posts/australian-water-association_partnerships-for-a-resilient-and-climate-activity-7093017702432206849-MmrK?utm_source=share&utm_medium=member_desktop		x	x	
Pacific/Australia	Solomon Water/Goulburn Valley Water 7	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterassociation-awainternationalprogram-activity-7057571645590302722-lDRK/?utm_source=share&utm_medium=member_desktop%22%20%5Ct%20%22_blank		x	x	
Pacific/Australia	Solomon Water/Goulburn Valley Water 8	LinkedIn	https://www.linkedin.com/feed/update/urn:li:activity:7125670373026603008/		x	x	
Pacific/Australia	Solomon Water/Goulburn Valley Water Media Release 9	https://www.solomonwater.com.sb	https://www.solomonwater.com.sb/index.php/resources/media-releases/208-solomon-water-and-goulburn-valley-water-forge-international-partnership-to-address-climate-resilience-and-water-sustainability		x	x	

Pacific/Australia	Tonga Water Board/Unitywater 3	LinkedIn	https://www.linkedin.com/posts/australian-water-association_partnerships-for-a-resilient-and-climate-activity-7086950375693422592-HWfO/?utm_source=share&utm_medium=member_desktop%22%20%5Ct%20%22_blank		x	x	
Pacific/Australia	Tonga Water Board/Unitywater 4	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterpartnerships-unitywater-tonga-activity-7054000629207228416-Vstz/?utm_source=share&utm_medium=member_desktop%22%20%5Ct%20%22_blank		x	x	
Pacific/Australia	Tonga Water Board/Unitywater 6	LinkedIn	https://www.linkedin.com/posts/australian-water-association_partnership-international-water-activity-7082485806195511296-rEZ7/?utm_source=share&utm_medium=member_desktop%22%20%5Ct%20%22_blank		x	x	
Pacific/Australia	Tonga Water Board/Unitywater 7	LinkedIn	https://www.linkedin.com/posts/australian-water-association_tongawaterboard-climateresilience-australianwaterassociation-activity-7132557505318051841-ZQue/?utm_source=sh		x	x	

			are&utm_medium=member_desktop%22%20%5Ct%20%22_blank				
Program Wide	Water association partnerships accelerate shift to climate smart and resilient water sectors in the Asia-Pacific (AWA Website):	AWA Website	https://www.awa.asn.au/resources/latest-news/water-association-partnerships-accelerate-shift-to-climate-smart-and-resilient-water-sectors-in-the-asia-pacific	x	x	x	x
Vietnam /Australia	Partnering for water resilience: Coliban Water and Phu Tho Water Supply Company	AWA Website	: https://www.awa.asn.au/resources/latest-news/partnering-for-water-resilience-coliban-water-and-phu-tho-water-supply-company		x	x	x
Vietnam /Australia	AWA-VWSA online workshop	LinkedIn	https://www.linkedin.com/feed/update/urn:li:activity:7158585293732745216	x		x	x
Vietnam /Australia	Association - Association Online Workshop	VWSA's E-magazine	https://tapchinuoc.vn/vwsa-va-3-to-chuc-quoc-te-cung-trao-doi-kinh-nghiem-xay-dung-va-phat-trien-to-chuc-175231012132231389.htm?fbclid=IwZXh0bgNhZW0CMTAAAR16EnJJ28VEYPjnLpXdzCQSxT3KvR0zntWWvKtlDKUspSePanV7NKsODSM_aem_Ad1oYsBZh-8eJlfPjAB5Rupw3t1GpE-zjh5VuXWQMcqfy5ZBGbSUcx_59uwBaHRyU	x		x	x

			orHtcgmc8T4gW4fB-Bo7-s5				
Vietnam /Australia	VWSA face-to-face meeting with AWA	Facebook	https://www.facebook.com/capthoatnuocVietnam/posts/pfbid02ure6HuyEALYGtMZEowRhu3oCQKNZL9dHQKyPf1hSwiz3CWmR82E93ED4A63fvxcdl	x		x	x
Vietnam /Australia	GEDSI workshops in Vietnam	LinkedIn	https://www.linkedin.com/feed/update/urn:li:activity:7150725505086853120	x		x	x
Vietnam /Australia	Empowering Diversity in Vietnam	AWA Website	https://www.awa.asn.au/resources/latest-news/empowering-diversity-inclusion-training-in-Vietnams-water-utilities	x		x	x
Vietnam /Australia	Ambassador to Vietnam supports knowledge exchange for clean water in Phu Tho Province	AWA Website	https://www.awa.asn.au/resources/latest-news/ambassador-to-Vietnam-supports-knowledge-exchange-for-clean-water-in-phu-tho-province	x	x	x	
Vietnam /Australia	Australian-regional-water-sector-strengthens-ties-with-Vietnamese-partners-in-50th-year-of-cooperation	AWA Website	https://www.awa.asn.au/resources/latest-news/australian-regional-water-sector-strengthens-ties-with-Vietnamese-partners-in-50th-year-of-cooperation	x	x	x	

Vietnam /Australia	Coliban Water & Phu Tho WSC 1	LinkedIn	https://www.linkedin.com/posts/australian-water-association_partnership-climatechange-australianwaterassociation-activity-7130730126568288256-sw2A/?utm_source=share&utm_medium=member_desktop	x	x	x	
Vietnam /Australia	Riverina Water & An Giang PCERWASS 1	Riverina Water's website	Vietnamese Visit :: Riverina Water (nsw.gov.au)	x	x	x	
Vietnam /Australia	Riverina Water & An Giang PCERWASS 2	LinkedIn	https://www.linkedin.com/posts/riverina-water-county-council_this-week-a-group-of-9-visitors-from-an-giang-activity-7128251144551747585-vXyP/?utm_source=share&utm_medium=member_desktop	x	x	x	
Vietnam /Australia	Riverina Water & An Giang PCERWASS 3	http://ttnsvsmtag.com.vn/	http://ttnsvsmtag.com.vn/news/chuyen-tham-quan-hoc-tap-kinh-nghiem-trong-quan-ly-cap-nuoc-nong-thon-tai-nuoc-uc	x	x	x	
Vietnam /Australia	Coliban Water & Phu Tho WSC (VWSA Article 1) 1	VWSA's E-magazine	https://tapchinuoc.vn/thuc-day-hop-tac-nganh-nuoc-viet-nam-australia-175230726103221279.htm	x	x	x	
Vietnam /Australia	Coliban Water & Phu Tho WSC (VWSA Article 2) 2	VWSA's E-magazine	https://tapchinuoc.vn/hop-tac-giua-ctcp-cap-nuoc-phu-tho-va-coliban-water-nguoi-dan-ky-vong-het-khat-mua-nang-nong-	x	x	x	

			175230831151253607.htm				
Vietnam /Australia	Coliban Water & Phu Tho WSC (VWSA) 4	Facebook	https://www.facebook.com/capthoatnuocVietnam/posts/pfbid02CR5hzwWmq1paF5yYTmGgUkXtFfGibR969pdpPZ8K5HT2PKwkipnMoWzVcU9k4sJcl	x	x	x	
Vietnam /Australia	Companies from Can Tho, Australia cooperate in water management	VWSA Website	https://vwsa.org.vn/vn/article/2831/cac-cong-ty-cua-can-tho-australia-hop-tac-quan-ly-nuoc.html		x	x	
Vietnam /Australia	Can Tho Wassco/Urban Utilities	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterassociation-awainternationalprogram-activity-7057514590842077184-Sm52/?utm_source=share&utm_medium=member_desktop		x	x	
Vietnam /Australia	Can Tho Wassco/Urban Utilities 2	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterassociation-awainternationalprogram-activity-7056885291260805120-0TVF/?utm_source=share&utm_medium=member_desktop		x	x	

Vietnam /Australia	Can Tho Wassco/Urban Utilities 3	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterassociation-awainternationalprogram-activity-7124605867043295232-RtFF/?utm_source=share&utm_medium=member_desktop		x	x	
Vietnam /Australia	Can Tho Wassco/Urban Utilities 4	LinkedIn	https://www.linkedin.com/feed/update/urn:li:activity:7064448651481268224/?updateEntityUrn=urn%3Ali%3Afs_feedUpdate%3A%28V2%2Curn%3Ali%3Aactivity%3A7064448651481268224%29		x	x	
Vietnam /Australia	Can Tho Wassco/Urban Utilities 5	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterpartnership-australianwaterassociation-activity-7064103672032489472-q3Ip/?utm_source=share&utm_medium=member_desktop		x	x	
Vietnam /Australia	Hoa Binh Water/Cassowary Coast Regional Council 1	VWSA Website	https://vwsa.org.vn/vn/article/2888/ghep-doi-hoc-tap-trao-doi-kinh-nghiem-giua-cong-ty-cp-nuoc-sach-hoa-binh-va-hoi-dong-vung-cassowary.html		x	x	

Vietnam /Australia	Hoa Binh Water/Cassowary Coast Regional Council Outbound 1 Study Tour	LinkedIn	https://www.linkedin.com/posts/australian-water-association_australianwaterassociation-awainternationalprogram-activity-7060098458719842304-1W0R/?utm_source=share&utm_medium=member_desktop		x	x	
Vietnam /Australia	Hoa Binh Water/Cassowary Coast Regional Council Outbound Study Tour 2	LinkedIn	https://www.linkedin.com/posts/australian-water-association_partnership-climatechange-vwsa-activity-7140898220213252096-8N4V/?utm_source=share&utm_medium=member_desktop		x	x	
Vietnam /Australia	Cassowary Coast RC and Hoa Binh CWC	LinkedIn	https://www.linkedin.com/posts/australian-water-association_sustainablewaterforall-climateaction-australianwaterassociation-activity-7176005075549466624-TQJa/?utm_source=share&utm_medium=member_desktop		x	x	
Vietnam /Australia	Riverina Water & An Giang PCERWASS (NCERWASS) 5	Facebook	https://www.facebook.com/permalink.php?story_fbid=pfbid02iHMn88egkwQgd6o5SaYEZ2Xka3GfiCUo3y3reuCx9iefmBqEihJYLjFVaMYizV65l&id=100064779430672&notif_id=1700214008996975&notif_t=fe		x	x	

			edback_reaction_generic&ref=notif				
Vietnam /Australia	Riverina Water & An Giang PCERWASS (NCERWASS) 6	Riverina Water's Newsletter	https://australianwater-my.sharepoint.com/:i:/g/personal/hvtran_awa_asn_au/EcAay6JHOp9Dt57Y4Q-64TUBhrvHDoT_3l5ib1pUuyx26g?e=8y4l6o		x	x	
Vietnam /Australia	Coliban Water & Phu Tho WSC (VWSA Article 1) 3	VWSA's website	https://vwsa.org.vn/vn/article/2889/hop-tac-viet-nam-a-australia-cai-thien-chat-luong-nuoc-tho-dau-nguon-va-tu-dong-hoa-san-xuat.html		x	x	
Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 6	AWA Website	https://www.awa.asn.au/resources/latest-news/australian-regional-water-sector-strengthens-ties-with-Vietnamese-partners-in-50th-year-of-cooperation		x	x	
Vietnam /Australia	Can Tho Wassco/Urban Utilities 6	LinkedIn	https://www.linkedin.com/feed/update/urn:li:activity:7122545469204938752/?updateEntityUrn=urn%3Ali%3Afs_feedUpdate%3A%28V2%2Curn%3Ali%3Aactivity%3A7122545469204938752%29		x		
Vietnam /Australia	Hoa Binh Water/Cassowary Coast Regional Council 3	ISSU	https://issuu.com/cairnslocalnews/docs/cln26may23ma00-ccrc/s/25099038		x		

Vietnam /Australia	Hoa Binh Water/Cassowary Coast Regional Council Inbound Study Tour	LinkedIn	https://www.linkedin.com/posts/australian-water-association_knowledge-waterpartnership-Vietnam-activity-7064404176813916160-Oq4_/?utm_source=share&utm_medium=member_desktop		x		
Vietnam /Australia	Coliban Water & Phu Tho WSC 2	LinkedIn	https://www.linkedin.com/posts/greta-pullen-68b530b3_an-amazing-opportunity-to-present-on-water-activity-7128233338384891904-l7SL/?utm_source=share&utm_medium=member_desktop		x		
Vietnam /Australia	Coliban Water & Phu Tho WSC 3	LinkedIn	https://www.linkedin.com/posts/damian-wells-a7875650_vietnam-water-activity-7132542189145915395-1MSW/?utm_source=share&utm_medium=member_desktop		x		
Vietnam /Australia	Hoa Binh Water/Cassowary Coast Regional Council 2	VWSA's E-magazine	https://tapchinuoc.vn/hoa-binh-queensland-australia-hop-tac-giam-that-thoat-nuoc-175230503102700951.htm	x	x	x	
Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 7	An Giang PCERWASS Website	http://ttnsvsmtag.com.vn/news/hoi-thao-xay-dung-nganh-nuoc-co-kha-nang-thich-ung-voi-bien-doi-khi-hau-thong-qua-quan-he-doi-tac-quoc-te-tai-ozwater24	x	x	x	

Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 8	NCERWASS FB	https://www.facebook.com/permalink.php?story_fbid=pfbid02gc3XMBFEzWdwuP3dH798t7AfBRhWM6VNTsRsegmCa1ZADzE9mfTziGrDPpdqKo2Pl&id=100064779430672&gidzl=gw9zKz3nwd-ljNzHq-dkUQgnULB9lkrzuET_KClkx7s_i2u2aE_h8kombBL-IlEWYkR1qM6HDQgGPrFpkUG	x	x	x	
Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 9	MARD website	https://ns.mard.gov.vn/Pages/chi-tiet-tin.aspx?NewsID=53049	x	x	x	
Vietnam /Australia	VWSA and Participating Water Utility at Ozwater'24	VWSA's E-magazine	https://tapchinuoc.vn/vwsa-dan-dau-doan-doanh-nghiep-nganh-nuoc-cua-viet-nam-tham-du-ozwater24-tai-australia-175240501180128301.htm	x	x	x	
Vietnam /Australia	Hoa Binh Water/Cassowary Coast Regional Council 2	Facebook	https://www.facebook.com/capthoatnuocVietnam/posts/pfbid02Y8Vg12VxKNd7dXCPyQYGrb3pQ34yP5E6KULodtnfXSZhLtibmLYWhDfjUCwzBVtMl		x	x	

Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 10	Riverina Water Website	https://rwcc.nsw.gov.au/Vietnam-visit?fbclid=IwZXh0bgNhZW0CMTAAAR0Oj8pmEcCCW4Bj9HK8qco2wezzjWAw01joK5A6g0RLFim3chxXM5MGfkk_aem_AcfbBxSXnmEDtfvko_iDqKWX3U35JssNpCxZHQ9UHgWICev6oG1wkeBI4DpTSnAs-_4rHDeIbv3cipWfJMg6Oaoy		x	x	
Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 11	Facebook	https://www.facebook.com/RiverinaWater/posts/pfbid02zt3TWL25fRtAsWvQAtW6v1B37KoKoxY4ze4db8AxxLZuM4aHLpHbWeN3TETYa1eCl		x	x	
Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 12	MARD website	https://ns.mard.gov.vn/Pages/chi-tiet-tin.aspx?NewsID=52999	x	x	x	
Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 13	Facebook	https://www.facebook.com/permalink.php?story_fbid=pfbid02xourRPozTKLFUgaMDbgiJ6WBETGTo6iEZk1oj37vPZNm2DLF5Lqpb5NwEGVb45Uil&id=100064779430672	x	x	x	
Vietnam /Australia	Riverina Water, An Giang PCERWASS & NCERWASS (AWA) 14	An Giang DARD website	Sở Nông nghiệp và PTNT tỉnh An Giang	x	x	x	

14 Annex 3. Overview of action plan focus areas for each partnership

Overview of action plan focus areas as determined at the start of the partnership program in 2022.

Action Plan Focus Areas - Associations

Action Areas	Description	Theme
VWSA		
#1	Enhancing VWSA's capacity in member communications with development of member database and communication system.	Data management Advocacy
#2	Enhancing VWSA's capacity in development of GEDSI programs including Women in Water and Vietnam YWP network.	GEDSI
#3	Creating opportunities and providing the platforms for Can Tho Wassco and Hoa Binh Clean Water Company to share their learnings on climate smart and resilient water management from their partnerships with Urban Utilities and Cassowary Coast Regional Council with the wider water sector.	Knowledge sharing
PWWA		
#1	Develop PWWA's communications for impact capacity, strengthening trust in the PWWA reputation and increasing momentum for a resilient and climate smart water sector.	Advocacy
#2	Building business resilience in both Associations by improving member value through new and existing member offerings to drive a resilient and climate smart water sector	Member value
#3	Increase the impact and inclusivity of PWWA's climate resilience knowledge exchange activities, including at the annual PWWA conference	Knowledge sharing
PERPAMSI		
#1	Building business resilience in both Associations by improving member value through new and existing member offerings to drive a resilient and climate smart water sector.	Member value
#2	Improving data collection processes to generate member and water sector insights to enhance PEPRAMSI's capacity to represent Indonesia's water sector with key decision makers.	Data management Advocacy
#3	Creating opportunities and providing the platforms for Tirta Musi and Giri Menang to share their learnings on climate smart and resilient water management from their partnerships with Yarra Valley Water and TasWater with the wider water sector.	Knowledge sharing

Action Plan Focus Areas - Utilities

Action Areas	Description	Theme
TasWater and PT. Air Minum Giri Menang		
#1	Building resilient water systems to reduce non-revenue water loss through improving new and existing assets.	NRW
#2	Establish documented processes for incident management and build capability to respond to climate change related emergencies.	Incident management
Yarra Valley Water and Tirta Musi Palembang City		

#1	Building resilient water systems and improving business sustainability through reducing system water losses	NRW
#2	Building resilient water systems through implementing measures to achieve energy efficiency and aiming to low carbon future	Energy efficiency
#3	Strengthening business resilience and incident management and response to climate change related emergencies through building capacity on wastewater management	Wastewater management
Hoa Binh Clean Water Company and Cassowary Coast Regional Council		
#1	Building water resilience and climate smart through online monitoring of turbidity of water source quality	Water quality
#2	Building water resilience and climate smart via sharing knowledge to reduce water losses	NRW
#3	Building water resilience and climate smart via sharing knowledge to enhance the efficacy of asset management	Asset management
Can Tho Water Supply and Sewerage Company and Urban Utilities		
#1	Building water resilience and climate smart through improving capability for the development of operating strategies and protocols for asset management.	Asset management
#2	Building water resilience and climate smart through improving capability for development of operating strategies and protocols to manage water supply quality with a variable source water due to climate change with a focus on online monitoring end-to-end from source to network	Water quality
Tonga Water Board and Unitywater		
#1	Enabling sustainable and resilient water supply through commissioning and asset management framework development of TWB solar farm to provide reliable and sustainable power.	Energy & asset management
#2	Climate proofing and resilience through increasing capability for disaster preparedness and response.	Incident management
#3	Quick wins: one off knowledge exchange workshops and activities supporting increased climate smart capability at TWB	Asset management Financial forecasting & modelling NRW
Solomon Water and Goulburn Valley Water		
#1	Climate resilient asset management practices: co-design of solution to reduce saltwater ingress at Noro water source	Saltwater intrusion
#2	Climate resilient water management: reducing physical water losses from the water network	NRW
#3	Improved business resilience: improving financial position re-designing the meter to cash (billing) process.	Business resilience
Phu Tho Water Supply Company and Coliban Water		
#1	Improving capacity to undertake water quality monitoring of raw water on rivers and treated water in the distribution network, aiming to enhance the quality of water delivered to customers	Water quality
#2	Review and assess the automation system of Viet Tri WTP and Phong Chau WTP, provide recommendations on optimizing efficacy and costs of operations	Operations
An Giang PCERWASS and Riverina Water		
#1	Improving capacity in non-revenue water focusing on the development of SOP prevention approach and incident management and trainings for An Giang PCERWASS staff	Incident management

#2	Improving capability in asset management focusing on digitalization of assets in the water supply system (WTPs, Water Distribution Network, Customer data).	Asset management

Ends.