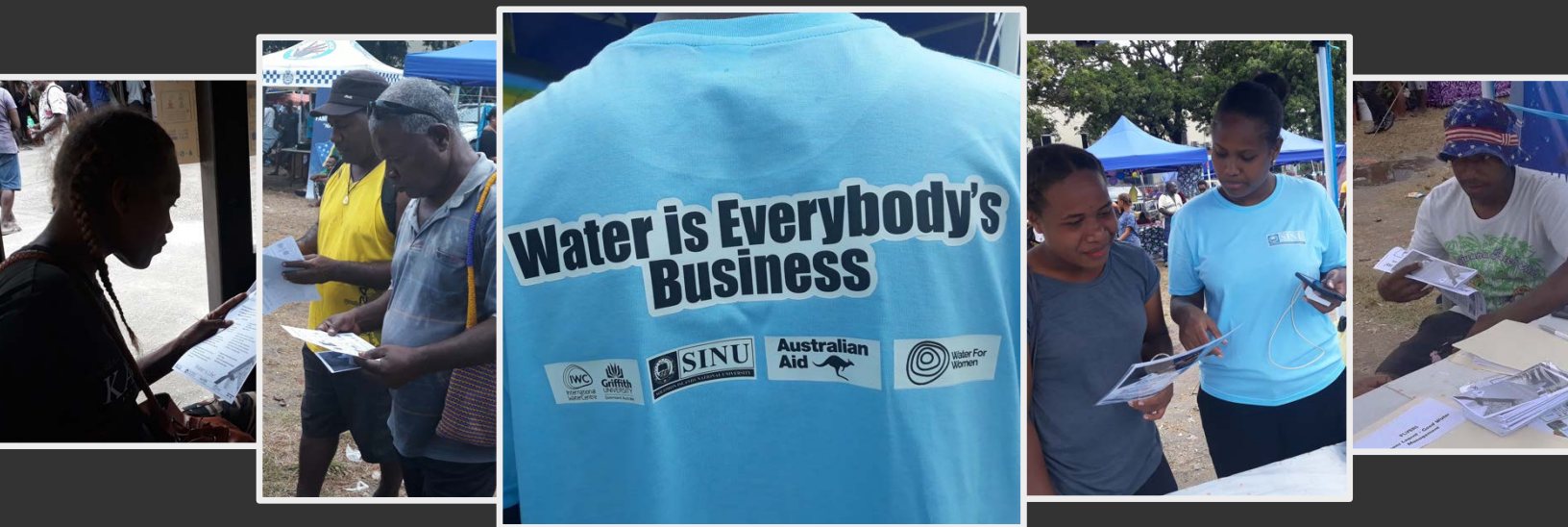




## RESEARCH BRIEF

# The Potential Role of Social Networks in improving Rural Community Water Management: Insights from Solomon Islands

MAY 2022



## KEY Findings: Provincial Day social networks

This research explored whether existing town-village social networks could be productively leveraged for supporting improved rural community water management (CWM) and WASH. The piloting of sharing social marketing messages and technical information at select Provincial Days in Honiara indicated that this may be an effective and efficient strategy to share targeted information with rural communities.

1. Provincial Days are very popular in Solomon Islands, with large numbers of people attending events in Honiara, including both visiting rural people and urban-based rural island emigrants, who were very interested in learning about CWM.
2. All respondents found the content and messages shared interesting; females most preferred the videos while males most preferred the handouts.
3. Even 4 to 6 months after the event, respondents had good recall of key themes, such as the importance of women and youth in formal CWM groups, self-reliance, and cooperation and collective action.
4. 'Water is Everybody's Business', an overarching key message, was the most commonly recalled message. This message was delivered using social marketing tactics and aimed to influence collective action for community water management.
5. All respondents reported that they would share the information presented at the Provincial Days, and during the follow-up survey all respondents reported that they had shared the information with people back in their 'home' rural community (<100 people).
6. Provincial Days appear to be an appropriate context for sharing information on community water management: the topic was of interest to participants, they recalled key messages and confirmed this information had been shared with others.

Town-based gatherings such as Provincial Days can ultimately allow targeted information to be shared with many community members and their family and friends in a cost-effective and catalytic manner. Messages focused on collective action, such as "Water is Everybody's Business" which highlight that all individuals have a role to play in ensuring 'good' community water management, may be particularly suited to large public gatherings such as Provincial Days. More complex and detailed information, such as training in specific management and operational aspects, should be delivered by more direct and place-based means.



Attendee, Isabel Provincial Day



Collin Benjamin

### Urban - rural linkages are strong in PICs, supporting resilience and social protection

Table 1: Select data on village-town linkages (n = 394)<sup>1</sup>

SOLOMON	FIJI	
57%	41%	% of households (HHs) who have close family members in town
48%	47%	% of HHs who receive remittances
30%	35%	% of HHs who send money to town
44%	25%	% HHs where "people pay for other things" <sup>2</sup>

Prudence Trina (SINU) Isabel Provincial Day celebrations, Honiara

## SOCIAL NETWORKS AND WASH: Can leveraging social networks improve rural water management and WASH outcomes?

Access to safe water, that is reliable and sufficient in quantities, remains a challenge for rural communities in Solomon Islands. If community water management (CWM) is to remain the dominant water provision model in rural Pacific Island Countries (PICs), then stronger and more active CWM groups are needed. Water supply management needs to be recognised as just as critical to community well-being as village councils, women's and youth church groups, and other thoroughly localised governance systems. This is what is required for safe, secure, reliable and sustainable rural WASH services to be achieved where external support is highly constrained.

As part of a broader program researching ways to improve rural CWM and associated WASH (water supply, sanitation and hygiene) outcomes, this Brief reports on a research activity designed to explore whether Provincial Day celebration events in urban centres, such as Honiara, were a productive avenue whereby informal social networks could be targeted by governments, civil society organisations and others to potentially influence rural CWM outcomes. This research was completed by piloting the sharing of CWM information at two provincial days.

### Why urban-rural networks?

Population growth and rural-urban migration rates in PICs are amongst the highest in the world (Figure 1). Along with an acute "youth bulge", these demographic trends raise significant socio-economic challenges (Keen and Barbara, 2015; UN-HABITAT, 2020). However, there are strengths and opportunities in these changes. Increasing urbanisation has been paralleled by strengthened connections between island and town, as people travel back-and-forth in search of job opportunities, better education and health services. In PICs, the rural development sector 'enabling environment' consists of more than the government and public and private partners - it also includes urban residents. In short, the 'village' extends well beyond its material and spatial borders. Norms of obligation and reciprocity flow from town to village and from village to town. Our earlier research found that half of all surveyed rural households received domestic remittances, whilst around a third of rural households sent money to town (Table 1). These, and other forms of non-monetary assistance, provide an important safety net. Whilst often familial focused, such support can and does encompass community-wide development aspirations, including improved water and sanitation outcomes.

## Community Water Management Plus (CWM+)

**Government and private sector water services to rural populations in PICs are limited and likely to remain so.** Consequently, community-based water management (CWM) will remain the dominant model for rural water service delivery into the future, as reflected in many Pacific government WASH policies. However, evidence from the Pacific and elsewhere indicates that basic models of CWM, in which communities bear full responsibility to manage water systems after their installation, typically have low sustainability and limited scalability (Clarke et al., 2014; Bond et al., 2014; Hutchings et al., 2015; World Bank, 2017). **This leads to poor WASH outcomes**, such as inadequate accessibility, quality, and reliability of water, and compromised hygiene practices (Hutchings et al., 2017).

**The community water management plus (CWM+)** model is considered a viable improvement to the basic CWM model (Baumann, 2006; Hutchings et al., 2015, 2017). The CWM+ approach includes long-term support from external organisations or people following the initial hand-over of water infrastructure to a community. Although Pacific governments appreciate that further support is required to ensure good CWM and improved water services for rural populations, the mechanisms and types of support communities require are not well-understood.

Although previous CWM+ research has identified a range of generic intrinsic and extrinsic factors that influence 'good' CWM outcomes (Hutchings et al., 2017), the unique context of PICs requires rigorous place-based evidence about which approaches are most feasible and effective in the region.

The **PaCWaM+ Phase 1** research sought to identify what the 'plus' might look like in two Pacific Island countries (Solomon Islands and Fiji): what type of support is needed by communities and how that support might be best achieved. **Phase 2** activities focused on further exploring and, where possible, piloting some potential 'plus' approaches.

This particular research on Provincial Day celebration events in Solomon Islands is part of a wider suite of activities focusing on the question: **Are social networks a fruitful strategy for both governments and CSOs seeking to strengthen rural water services and further SDG 6 objectives?**



*Tap stand, Kolosiri, Isabel Island*

Collin Benjamin

## Social networks – connecting communities from towns to villages

Our earlier research (Love et al, 2020, 2021a) captured numerous examples of social networks already being used by community members to improve rural water services and management. Box 1 (below) is an example from Fiji.

This earlier research suggested that urban-rural linkages were more formalised in Fiji than in Solomon Islands (SI), and there was also more evidence of urban residents assisting the wider community rather than just extended family. In Fiji, family members residing elsewhere – mainly Suva but also Labasa, Nadi, other locales in Fiji as well as overseas – maintained very strong links with their home communities. Support was often materialised through fundraising [*solu*] and also included other forms of assistance, e.g. contributing to paying the Provincial levy [*solu ni yasana*]. Whilst there were some examples of this in Solomon Islands, it was less common

In Fiji we identified numerous examples of extra-local residents directly assisting with village level WASH-related developments (see Love et al., 2021a; Love et al., *in prep*). There were many examples in Solomon Islands in regards to building schools and community halls, but not in relation to WASH; it is simply not a high priority.

There was considerable evidence – in both Fiji and Solomon Islands – of national and provincial celebration days operating as trigger points for galvanising support from kin to help meet community development needs. This was the impetus for the Provincial Day pilot research, which currently are not regular places of promotion for water management or WASH.

## Phase 1 findings on village-town relations

**Our Phase 1** research captured numerous examples of social networks being used to improve rural water services and management. Below is an example from Fiji.

### Box 1. Leveraging social networks in Fiji - Galoa

#### Leveraging social networks for improved water services

##### A case-study from Galoa Island, Fiji

Galoa is a *koro* [registered village] of 50 households located on Galoa island, in the Province of Kadavu, southern Fiji. A sand-based island, Galoa has limited fresh water. Before colonial intrusion, people mainly collected fresh water from shore-line springs. In the 1930s, a series of communal cement rain water tanks were constructed. Later, a key shore-line spring near the village was improved (cemented) and used, primarily, for non-drinking purposes. Even as more families purchased household rainwater tanks, people still struggled to access sufficient, reliable, and safe drinking water. Using both micro- and meso-level social networks, Galoa residents ultimately found a solution to their water issues.

The *matagali* [clans/land owning units] in Galoa have strong socio-historical linkages with Wailevu, a *koro* located on adjacent Kadavu Island; a much larger, volcanic island with plentiful fresh water. Whilst many Galoa *matagali* have customary land on Kadavu, they do not have access to a reliable water source. In the early 2000s, some customary elders from Galoa approached the *matagali* leaders of Wailevu to request access to one of their water sources (Figure 2). Using traditional cultural protocols – e.g. kava [*yaqona*],<sup>3</sup> whales tooth [*tabua*], and other gifts (including money) – an agreement was reached. Moreover, to this day the women in Galoa harvest, dry, and annually 'gift' a large amount of pandanus (*P. whitemeanus*) to women in Wailevu for weaving mats, as Wailevu does not have much pandanus whereas it is abundant on Galoa island [called "*kie*"]. This was also part of the water access agreement.

Of further note in this example is how the community raised funds to support the government installation of the water system. The efforts were led by women. In October 1998, some women began selling mats in Kadavu whilst others travelled to Suva and sold them during the Fiji Day holiday. They also conducted fundraising activities [*solu*] with Galoa emigrants in town. They raised FJD\$3,000 / ~ AUD\$2,000. The next two years they did the same thing, selling mats and conducting *solu* in Suva with women from Galoa and elsewhere on Viti Levu. The following year (2001), the Galoa women's committee in Suva decided to move the mat sales and *solu* activities to Lautoka (western side of Viti Levu and the second largest city in Fiji). In the fourth year, the men joined the women in Suva and it was decided to use the money raised for both a community hall and a water supply system. Collectively, they raised over FJD\$30,000 [AUD\$20,000]. The water supply became operational in 2004 and is still running to this day.

This is a clear demonstration of how social networks are being used to help support rural community water services.

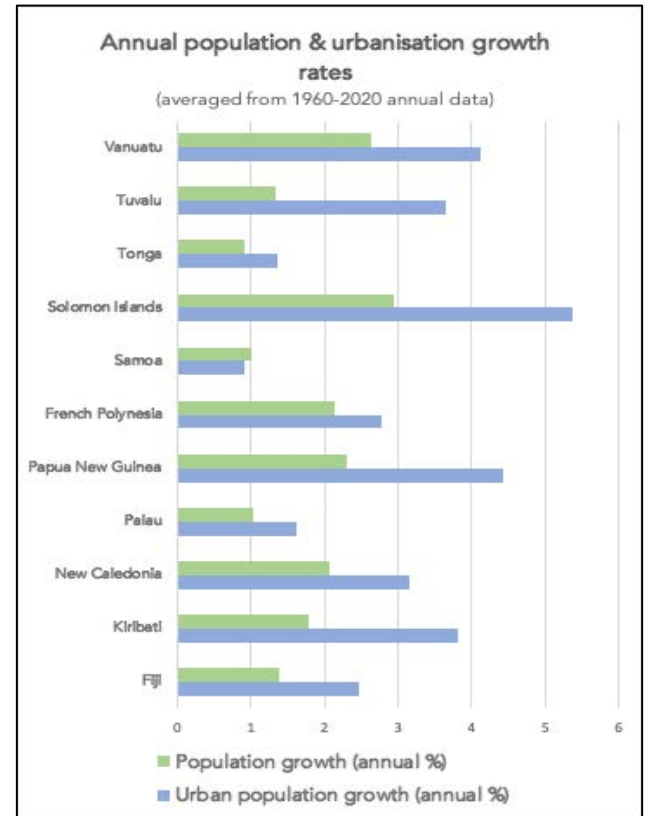


Figure 1: National and urban growth rates in select PICs (World Bank, 2020)

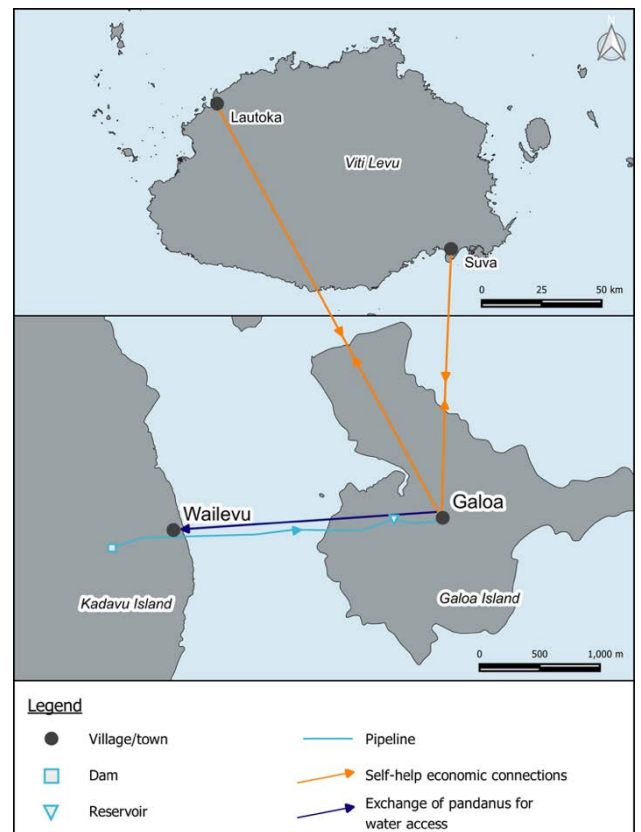


Figure 2: Galoa and Wailevu koro's, with location of Galoa dam and gravity-fed water supply system

## RESEARCH OBJECTIVES

The objective of the **leveraging social networks** component of our Phase 2 research activities are to: 1) Explore if, how, when, and where social networks are currently being used to support community development outcomes, in particular rural community water management; and 2) Identify contexts where social networks are active and pilot some novel social network leveraging approaches.

Leveraging social networks means to make use of existing social networks. In determining if this is possible, a social network analysis can be informative.<sup>4</sup> An example of Objective (1) was described in Box 1 (above), but further examples are also explored elsewhere. In

short, we undertook research on the role of urban-rural 'hybrid' Village Development Committees (VDC) in Fiji, focusing on their role in facilitating improved water and sanitation outcomes in rural areas, and explored the social media landscape in Fiji in the aim of better understanding the current and potential use of social media for rural community water development purposes (Love et al., *in review*). **This Brief focuses solely on our Provincial Day research in Honiara in 2021.**

Given the large number of rural emigrants based in town, Provincial Day celebration events are a significant opportunity for reaching-out to the 'whole community', as well as raising the priority of water in people's minds.

## Introduction

In partnership with Solomon Islands National University (SINU), in 2021 the PaCWaM + project conducted community-based water management information and advocacy campaigns at Isabel and Choiseul Provincial Day celebration events in Honiara. The objective was to explore the question: **Are Provincial Days an appropriate and effective forum for promoting 'good' community water management behaviour?**



Collin Benjamin

Figure 3: Project T-shirt - Isabel, Provincial Day

### Provincial Days: What are they and why target them?

In Fiji, place-based celebration events – many focused around Fiji Day (Oct. 10<sup>th</sup>) – are societal trigger points for urban and rural residents to gather and celebrate micro-

cultural identities and focus attention on rural development needs, including water supply issues.

This is less the case in Solomon Islands, but is still in evidence.

Provincial Days in Solomon Islands are nationally gazetted public holidays in each of the nine Provinces. Celebrations are held not only in villages and Provincial capitals but also in Honiara, where urban emigrants and place-based common interest associations arrange various celebration events. These events often last 5-7 days but typically culminate in a single 'official' celebration day somewhere in the national capital, Honiara.

These single day events or festivals typically involve a suite of activities – talks by dignitaries, *kastom* dances, live music, Church choirs etc. – and are often focused on a topical theme, e.g., Choiseul Day in 2021 was focused on "health and productivity" whilst the theme of the Isabel Day event (called the "Grereo festival") was "bridging our diversity through unity, culture and behaviour". The number of attendees at these Provincial Day celebrations are significant (in excess of 500 for Choiseul, 1,000-plus for Isabel).

In some contexts (e.g. Isabel) there are market-type stalls or information booths present at celebration days, with individual (private) food stalls, community-based associations in town – organised by wards – selling drinks and food (often local cuisine), and sometimes information / awareness booths. There were no information booths present at the Choiseul event, but there were various government and civil society booths at the Isabel Provincial Day, including: the Ministry of

Fisheries and Marine Resources (MFMR); the Solomon Islands Planned Parenthood Association (SIPPA); and, the Royal Solomon Islands Police Force (RSIPF).

Local WASH actors – such as the Department of Rural Water Sanitation and Hygiene (RWASH), the Ministry of Health and Medical Services (MHMS), and non-government organisations (NGOs) working in the WASH space – do not regularly attend these Provincial events to promote water management and/or WASH. This absence might be due to a fear of being badgered by participants requesting water and other infrastructure improvement projects for their home villages. However, these demands can be tempered through strategic messaging; countering 'project dependency' needs to be confronted, not ignored, by government and NGO agents. Moreover, socialising what 'good' community water management looks like is a requirement of promoting the 'active citizenship' demanded by the CWM model, where communities themselves are required to operate and manage their own water supply system. Such visibility also encourages accountability to the performance of development institutions in terms of effective service delivery (cf. Cox, 2009: 979).

## Activities and Methodology

Following our Phase 1 formative research work we began exploring a number of potential Phase 2 activities. This was undertaken by the research team (IWC, Griffith University and SINU) in consultation with our partners (Plan International-Solomon Islands, Live and Learn Environmental Education-Solomon Islands), and key government stakeholders (RWASH, the Ministry of Mines, Minerals and Rural Electrification (MMMRE).

Along with a number of other activities it was decided to pilot participating in a number of Provincial Day celebrations, to promote key community water management messages in engaging ways. Choiseul and Isabel celebration days were chosen due to their temporal suitability.

At each Provincial Day event it was proposed to:

- Give a presentation as part of the program of presentations on the main stage
- Staff an information booth to distribute handouts to interested participants and engage them in discussion about CWM
- Display the 'Water is Everybody's business' video and distribute the videos via Bluetooth to people's phones

The **key messages promoted** across the three delivery mechanisms were:

- The **value and benefits** of having 'good' community water management (and a 'good' water system)
- The importance of **social inclusion** within community water management groups (having a significant number of women and youth as formal members)
- The importance of **collective action** and **collaboration**; 'good' water management demands collective action – "Water is Everybody's business", not just the water committee
- **Self-reliance** (do not rely on others, such as government or NGOs); communities must take responsibility for managing and maintaining their own water supply system, including purchasing spare parts (e.g. water fee, fundraising)
- The importance of **regular maintenance**; proactive not just reactive maintenance activities, e.g. cleaning the dam regularly (not just after heavy rain)
- Water is life and should be **managed wisely** (don't waste drinking and non-drinking water, fix leaking pipes, use of multiple water sources).

These messages were identified from our Phase 1 research and considered to be the most salient, transferable, and open to influence behaviours (as well as being likely to contribute to improved community-water management outcomes). Thus, it is these messages which we sought to monitor for message penetration.



Figure 4: Choiseul Prov Day advertisement, 2021

Provincial Day celebration committees were both positive about including the team at their respective events, making time in their programs for Nixon Panda (SINU) to present and provided a booth / information

stall. The SINU team arranged the logistics and IWC and SINU co-produced a series of flyers specifically for the events:

- **"Good Community Water management"**  
(summarising lessons-learned from the Phase 1 research)
- **"Water is Everybody's business!"**

The previously produced 'Water is Everybody's Business' series of videos were screened at the display booth. As part of the broader research project, these videos were produced using social marketing concepts, to positively influence attitudes about collective and inclusive community water management.

The teams activities at the two Provincial Days were slightly different. At the Choiseul event [held 25/02/2021] one of the project videos was shown [Water is Everybody's Business, 3 min version] during the presentation, and all three short videos were displayed on rotation in the information booth. At the Isabel event [held 25/06/2021], an oral presentation was given and the videos were not shown in the booth but rather shared via Bluetooth to people's phones (which proved very popular).

### Assessing the potential of Provincial Day advocacy of CWM

The higher-order assumptions informing the overall PaCWaM+ Phase 2 theory of change (ToC) include: community water management (CWM) is a relatively low priority (due to a dynamic range of competing issues and structural factors); people are uncertain about what 'good' community water management looks like; there is (sometimes) a lack of awareness about the linkages between WASH and broader social, bio-physical and economic outcomes; and, greater socialisation and normalisation of CWM can help redress some of these challenges.

The specific ToC informing our Provincial Day activities included a mix of health promotion and social media advocacy strategies (e.g. Domegan, 2021; Effing and Spil, 2016; Hastings, 1991; Lefebvre, and Floara, 1988). Due to its novel and exploratory nature, as well as budget and other resource constraints, our main research objective was to assess effectiveness through attitudinal data collected from participants at the Provincial Day events using short surveys at two points in time: during or shortly after the event, and 4-6 months after the event.

**Advocacy / social marketing approaches** – which our Provincial Day activities broadly sit under – are

notoriously difficult (and costly) to monitor and evaluate, and challenging to identify impact attribution (e.g. Patton, 2008; Meadley et al., 2003). Regardless, in the realm of broad behaviour change health interventions, social marketing approaches drawing on interpersonal communication, message placement, promotion, dissemination, and outreach, are widely accepted techniques (e.g. Evans, 2006; Liao et al., 2020).

To answer our overarching question – *Are Provincial Days an appropriate and effective forum for promoting improved community water management behaviour?* – we devised a range of sub-questions:

- Were people engaged by the content?
- Are Provincial Days a relevant context for presenting community water management information?
- Which content delivery approach is most appropriate and effective (video, oral presentation, flyers / handouts)?
- Would this information reach the rural community level?



Audience at the Choiseul Prov. Day watching video & presentation

To answer these questions a short survey instrument of 16 questions (consisting of closed, open and multiple choice) were deployed. Sampling strategies involved a mix of convenience, random, and snowball sampling. Ultimately, a total of 38 surveys were undertaken with 31 individuals (Isabel n=16; Choiseul n=15), with 7 follow-up interviews undertaken with Choiseul participants only. Surveys were pre-tested and conducted by permanent and casual staff from SINU.

Survey data was collected on the Provincial Day itself as well as via telephone surveys after the events (following the collection of respondent contact details and consent).

For the Choiseul data collection, nearly half of the surveys were collected on the day with the remaining gathered 2-3 weeks after the event. The follow-up surveys were conducted four to six months later. The data collection for Isabel was slightly different, due to range of factors, and was collected over a longer post-event period, from on the day through to 6 months after the event.

All required ethics documentation was completed and approved prior to data collection. Informed consent was obtained from all survey respondents before their participation, and only people over 18 were approached for recruitment. Both males and females were equally targeted for participation.<sup>5</sup>

The survey data was collected in Pijin, recorded in writing by the surveyor, translated into English and then entered into Excel and also SPSS™ for analyses.

## Limitations

We had planned for a minimum of 20 surveys from each event; the lower number of completed surveys were due to staff limitations (during the event SINU staff were busy doing other activities, such as manning the information booth, distributing handouts, assisting with logistics etc.). Changes in SINU staff associated with the PaCWaM+ project during the implementation period also affected data collection.

Additionally, whilst mobile telephone surveying is increasingly used in a variety of contexts in the region (e.g. Yoshida, et al., 2020), it is a relatively new data collection method and our success was ultimately mixed. The team only collected limited contacts and phone numbers on the day, and if people didn't answer or asked to be called back at another time it was appropriate to try again only a limited number of times. Along with other mitigating factors, this coalesced to limit the success of our follow-up data collection plans and resulted in a smaller sample size than anticipated.

Whilst the total survey numbers were smaller than planned, the consensus displayed in much of the responses give us reasonable confidence in the analyses that follows.

The other main limitation of the study is that we cannot confirm respondent reports that they shared key messages / information with people in rural communities who were not at the Provincial Days, let alone assess if they had any impact (e.g. stimulating discussion and action with regards to greater social inclusion in water management groups).



Setting-up the PaCWaM + booth at the Isabel Prov. Day / Grero Festival

## Results and Analysis

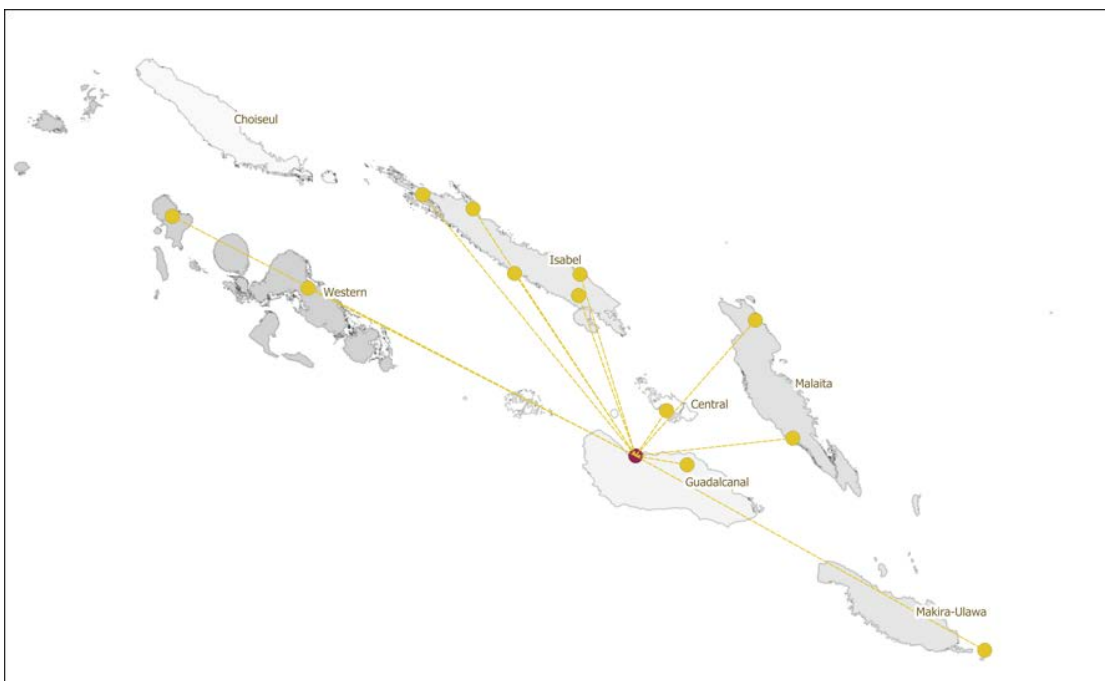
### Respondent attributes

Of the 31 survey respondents, 42% were male (n=13), 58% female (n=18). The age of those surveyed ranged from 18-65, with the mean age of respondents at the Isabel event being younger (23 years old) compared to Choiseul (40 years old). This variation may reflect the nature of activities on offer at the respective Provincial Days, with Isabel being more of a 'festival' and attracting a larger cohort of younger people.

Respondents were from a variety of locales; most from the Province being 'celebrated' but a not insignificant proportion of surveyed attendees (especially at the Choiseul event) were also from other Provinces (see Figures 5 and 6). Whether they were married into, or out of, the Province or simply 'opportunistic' attendees is not known.



*Figure 5: Respondents 'home' local – Isabel Provincial Day*



*Figure 6: Respondents 'home' local – Choiseul Provincial Day*

 Collin Benjamin


Prudence Tina and Joe Hagabore (SINU) with attendees - Isabel Prov. Day

## Message penetration

The majority of survey respondents reported that they had heard the presentation (81%), seen the flyer/handouts (90%), and watched the video (97%) (n=31). Below we explore participants responses to the following questions:

- Which information medium (the presentation, handout or video) was most interesting?
- What topic / information did you find most interesting?
- What did you learn about community water management?
- What does "Water is Everybody's Business" mean to you?
- Has anyone from town shared information about water management in your village before?
- Do you think it is useful to share information like this at events such Provincial Days?
- Do you think you will share this information?
- Do you have thoughts on other ways to share this kind of information?

## Message value – by medium

All the survey respondents reported that they found all three information media either a "little interesting" or "very interesting"; no one reported the "not very interesting" option. This suggests that rural water issues are of interest to many people, even those based in town. The video proved to be the most ("very") interesting (97%), followed by the handouts (90%) and the presentation (84%) (n=31). Females generally found the presentation and videos more interesting, whilst males found the handouts of (slightly) more value (Figure 7 a-c).

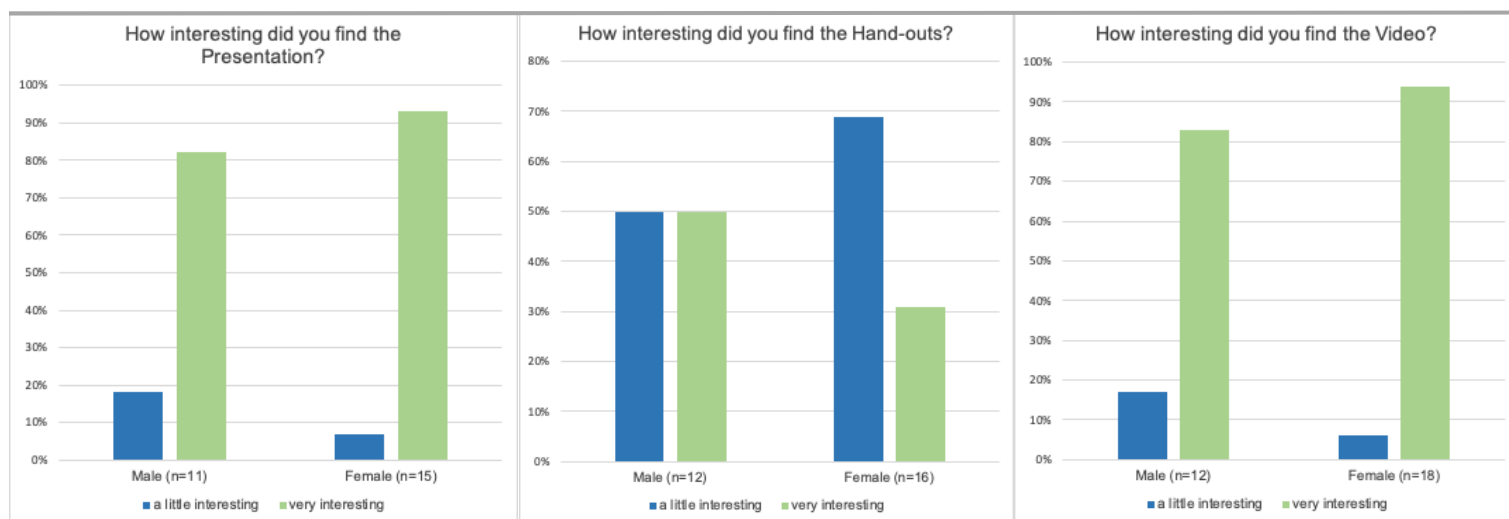


Figure 7 a-c: Survey respondents perspective on how interesting they found three key message mediums (n=31)

## Message resonance

Survey participants were asked – without any prompting or referencing any particular medium – **What did you find most interesting about the information provided?** Key themes and exemplar responses are illustrated below (Figure 8).

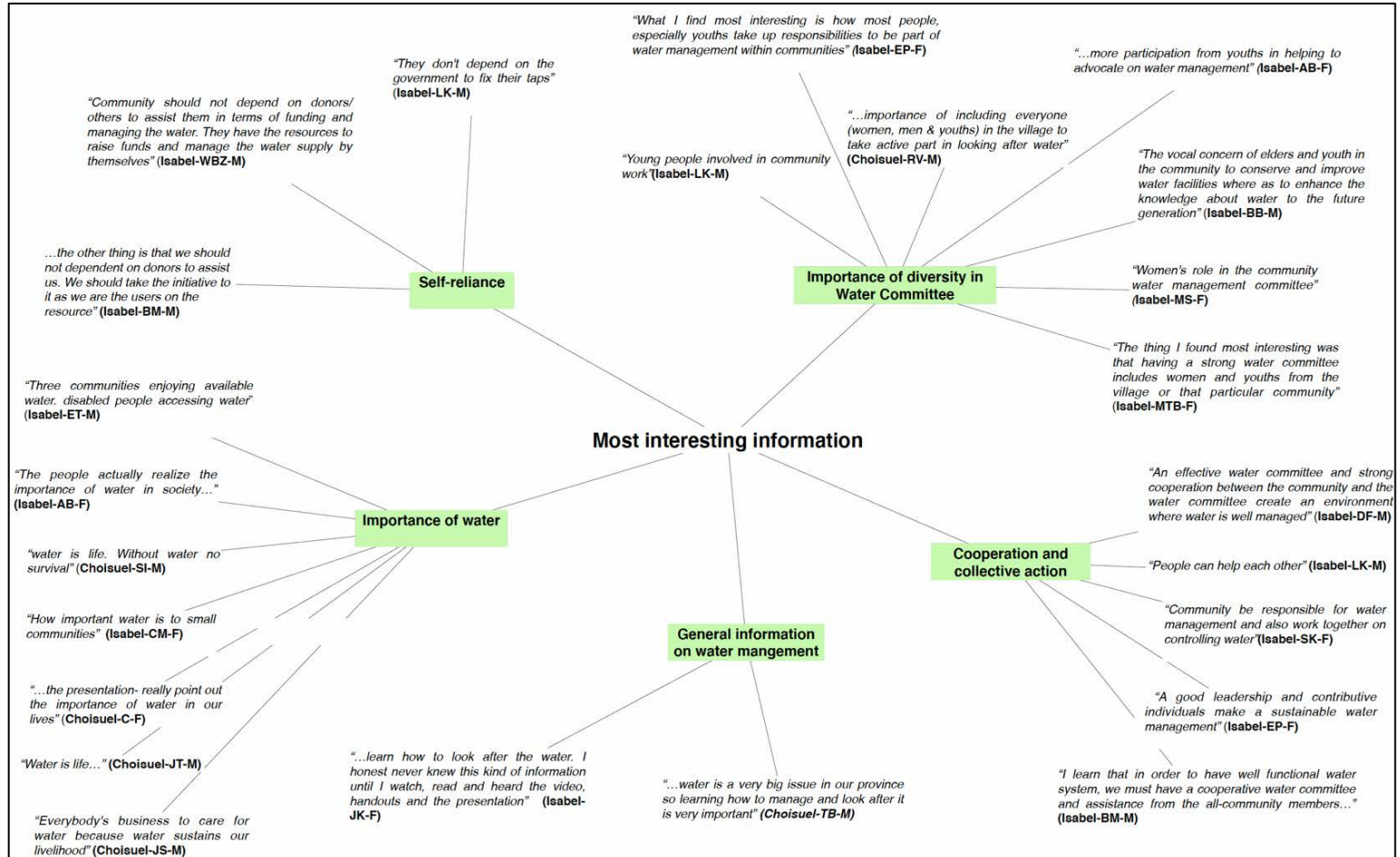


Figure 8: Exemplar survey responses to the question: What did you find the most interesting?

Key "interest" responses grouped by coded theme (in order of frequency) were:

- **Water management information (general)**
- **Importance of diversity (women and youth) in water management group**
- **Importance of water (e.g. water is life, livelihoods)**
- **Cooperation**
- **Self-reliance**

Cross-tabulated by gender, **males** tended to highlight the importance of **self-reliance** (not depend on government or donors), whilst more **females** highlighted the importance of water **committee diversity** (including women and youth in water management groups).

The importance of having **good co-operation** was equally emphasised by both genders. Females tended to underscore the **importance of water** more than males, and also the value of having women on the water committee. More males highlighted the importance of having youth on the water committee. One respondent (male) mentioned that having accessible water services for disabled people was important.

There was no discernible variation between survey respondents across the two different respondent groups (Choisuel and Isabel). Whilst the sample size is small, the trends are clear and similar enough (across both sites) to determine that the key messages were successfully communicated.

## Knowledge acquisition

The previous question examined what people found most interesting or significant (message resonance). We also asked respondents **What did you learn about community water management?** Many of the results overlap with the above responses, which is a positive correlation as we tend to remember what we find interesting much more than what doesn't interest us (Figure 9).

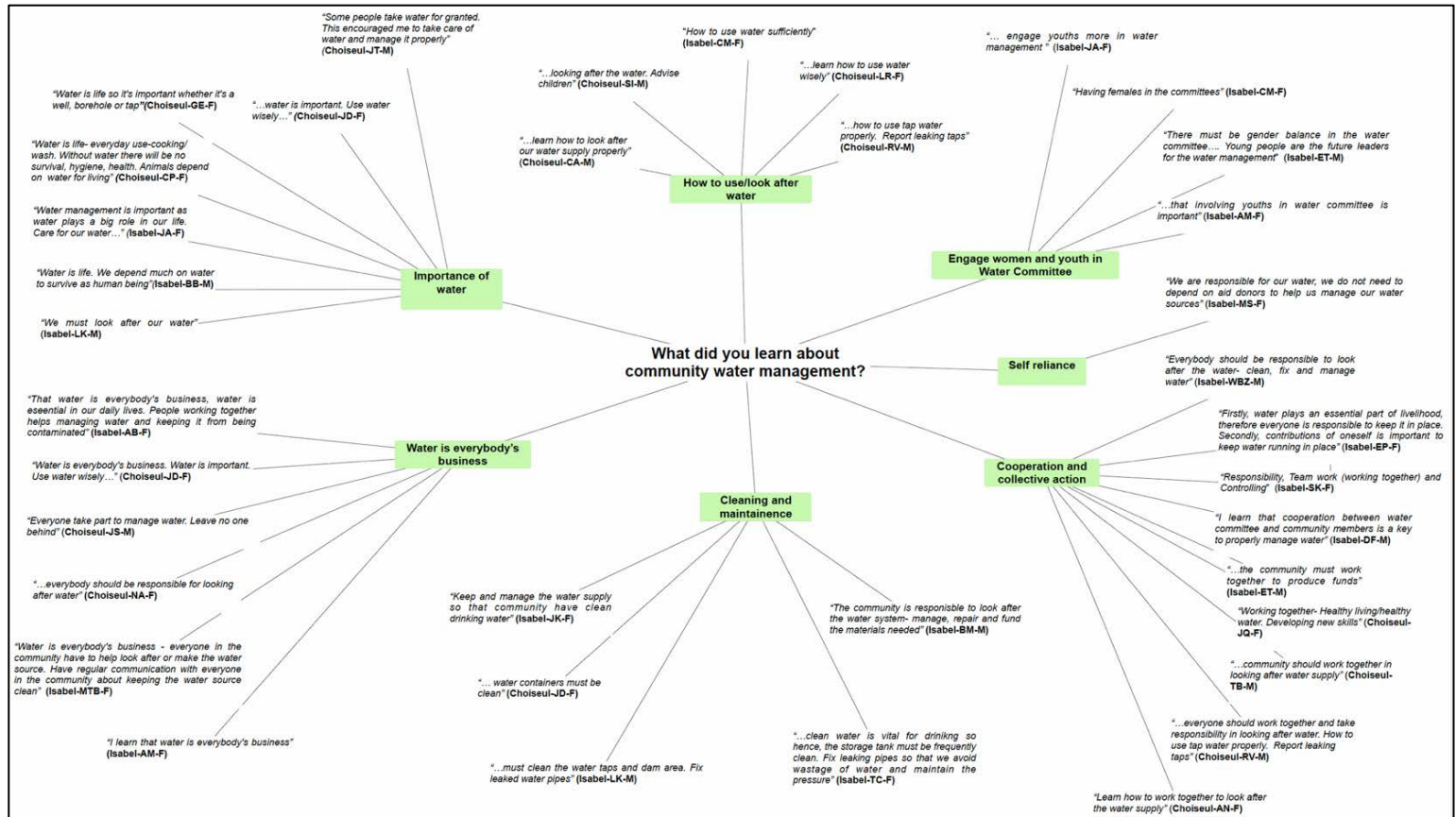


Figure 9: Exemplar survey responses to the question: What did you learn about CWM?

Key "learning" responses by coded theme (in order of frequency) were:

- **Water is Everybody's/Everyone's business**
- **Importance of water**
- **Community responsibility**
- **Cleaning and maintenance**
- **Work together (co-operation / collective action)**
- **Engage women and youth in water management**
- **How to use / look after water (wisely)**
- **Don't depend on external assistance**

The key axiom that "Water is Everybody's or Everyone's Business" clearly resonated with the respondents.



Collin Benjamin

Attendees, Choiseul Provincial Day

## Water management

Respondents were also queried about the water management situation in their 'home' rural village. **This line of questioning was included to sense-check our messaging and ensure that our key topics were relevant to attendees.**

Overall, respondents at the Choiseul event reported the least amount of 'formal' water management groups (6%), whereas 32% of respondents at the Isabel event reported that there was a dedicated water management group (water committee) (Table 2).

**Table 2:** Respondent water management situation

	Choiseul	Isabel
<b>No water management group</b>	40%	6%
<b>Water management committee / group</b>	20%	32%
<b>Each HH manages own water needs</b>	13%	37%
<b>No water supply system</b>	7%	6%
<b>No response / unsure</b>	20%	19%

These results are in relative alignment with the RWASH 2016 Baseline survey, which found that 3% of surveyed households in Choiseul and 32% in Isabel reported that their drinking water source was managed by a committee (RWASH, 2016a, 2016b).

Asked "Is your water supply managed well?", respondents at the Isabel event were more likely to say "yes" (69%, n=16) than those at the Choiseul event (53%, n=15). There was considerable attitudinal differences between male and females' evaluation of their water management status, with women generally far more critical.

***Cross-tabulated by gender, females were more than twice as likely to say that water was not managed well, reflecting their far greater involvement with, and dependence on, water services than males***

Given that our messaging was designed around specific water management issues – as identified from our Phase 1 research – we used this opportunity to further explore if the same issues were identified by attendees at the Provincial Days.

The majority respondents suggested that a "lack of cooperation / community responsibility" (including in the water committee WC) (n=9) was a key challenge, followed by "maintenance and repair" (n=7), "weather events" (n=5), and a "lack of funds" (n=4). Other issues included the absence of a water committee, vandalism and increased demand.

## Water management and social inclusion

Social inclusion in water management groups – namely the inclusion of women and youth as 'formal' members of a water committee – was identified in our formative research as a key issue. Villages where water committees had greater social inclusion generally had better water management outcomes. This has also been found in neighbouring Vanuatu with regards to women on water committees (Mommen et al., 2017).



*Youth members of the Kolosori Water Committee (from the video "iangfala")*

Respondents were asked, "Do you personally think that it is important for women and youth to be a member of the water committee?" They were also asked "Why?"

All of the respondents (100%) replied "yes" and gave a variety of reasons as to why they thought that women and youth should be included in a water management group. Reasons proffered for why women should be included in a water committee hinged on three themes: gender equality ("gender balance"); traits ("women are better managers"); and, most commonly, because they are the primary water users ("women use water every day"). Reasons given for why youth should be included in a water committee were based on two key factors: traits ("active", "strong", "innovative ideas"); and, because they are future leaders ("leaders of tomorrow").

***Whether these affirmative responses can be attributable to the programs 'messaging' cannot be confidently ascertained due to the small sample size and the potential for respondent bias; however, some of the 'why' responses certainly suggests that it played a part as they echo, sometimes verbatim, the messaging in the video.***

## Message dissemination

### Provincial Days: Appropriate context?

Respondents were directly asked if they thought that it was useful to share information on community water management at Provincial Day celebrations. All respondents replied "yes". When asked "why", the majority of respondents mentioned that it was a good opportunity to reach a large number of people (n=23):

“... this is the only event which people gathered together and it's an opportunity to share information regarding water management (Isabel-AM-F).

“... youths, women and men from all over Honiara will attend such events (Isabel-MTB-F).

One respondent noted that not everyone has ready access to this type of information:

“Some people have no access on internet, newspaper or even radios to get such information about water management (Choiseul -JQ-F)

Respondents were also asked, "Has anyone from town shared information about water management in your village before?" Respondents at the Isabel event were more likely to state that their home village had experience some outreach about community water management than those at the Choiseul event (Table 3).

**Table 3:** Shared CWM info in your village before? (n=31)

	Choiseul	Isabel
Yes	13%	37%
No	80%	50%
Don't know / not sure	7%	13%

### Sharing information with others

Respondents were asked: "Do you think it's appropriate and useful for people in town to share this kind of information back to your village when you visit?" All respondents answered in the affirmative. Similarly, when asked if they would share the information, everyone answered "yes".

When asked "who" they would be most likely to share this information with, respondents replied (in order of frequency):

- Family
- Community/neighbours/village
- Youth
- Friends.

Respondent bias cannot be dismissed, especially given the small sample size. However, there is anecdotal evidence that the videos have been shared to other people's phone who were not at the event. Given the somewhat limited (but improving) telecommunications coverage in Solomon Islands, and the cost of data, sharing via Bluetooth rather than social media platforms such as Facebook is a common practice, especially amongst those without formal employment. Of course, robust monitoring of such practices is near impossible.

### Other ways of sharing information

Respondents were also asked: "Do you have any thoughts on other ways to share information such as this?" The most frequent response was conducting awareness activities in the village – generally *tok stori* (two-way discussions, not just 'lectures') – was the most common response (64%). Many respondents mentioned

using the videos as a support tool, while two specifically mentioned "role play":

“ Show the videos to the community because some people can't read so the video will help them understand the message (Choiseul-C-F).

“ Do a role play/ drama to convey the message on water management m understand the message (Choiseul-MP-M).

The next most common response was social media (24%). This was sometimes mentioned along with radio, and in two instances alongside a broader campaign using TV and newspapers as well:

“ Through awareness programs and the social media (Isabel-ET-M).

“ Partner with 'Our Telekom' and disseminate information through texting [sending text messages to Telekom customer] (Choiseul-RV-M).

“ Sharing the video on social media or in village setting- Bluetooth or share the clips using phones (Choiseul-JQ-F).

“ Radio water awareness program, Facebook, and provide posters in the community (Isabel-DF-M).

## Social media and message dissemination

Respondents were specifically asked: "Would you share videos such as this on social media, such as Facebook or TikTok?"

All but one respondent (97%) said "yes". Respondents were also asked "why":

“ Because town people easily access information and better to go down and share to village because village people need to understand more about water (Choiseul-JS-F)

“ ...most citizens are on Facebook or TikTok and I am sure they can get clear information from watching the videos (Choiseul-JQ-F).

“ To inform my social media friends about how water can be manage. They can also share the information to their other friends (Isabel-TC-F).

“ We have a community Facebook page so I will be happy to promote and share the information. In this regard, they can pass on the information to their family and relatives back in the community. There are there in the village who have access to internet/Facebook so they'll be able to watch the video as well (Isabel-DF-M).



Attendees at the Choiseul Prov. Day waiting outside the auditorium

## Follow-up surveys

As noted in the limitations section, due to a number of extraneous factors structured follow-up surveys were only undertaken with seven of the original respondents surveyed from Choiseul.

All of the seven respondents reported that they had shared the information from the Provincial Day celebrations with others, verbally and in two specific cases via the flyer. Participants reported sharing information mainly with "family members" (in Honiara and "back in the village"). One very active female respondent reported that she had "shared it from Wagina to Sasamuga [...] when I returned in March this year" (Choiseul-JS-M). In total, respondents self-reported that it had been shared with over 109 people. All respondents stated that they would continue to talk about the key messages, because "water is life" (e.g., Choiseul AN-F) and "[many] new water and sanitation projects are coming up, so it is good to educate people on how to look after and sustain these new water supply [systems] (Choiseul-RV-M).

## Message Resonance

The follow-up survey respondents were asked what key messages they remembered from the presentation / videos / flyers. Examples include:

“ Everyone must work together to look after and take care of water because water is for everyone (Choiseul -AN-F).

“ Water is life. The only way to look after and take care of our water is by working together (Choiseul -JQ-F).

“ ...must work together to support good water management. Water is everybody's business (Choiseul -LR-F).

“ .. must contribute [financially] to support and help in looking after water (Choiseul -TB-M).

“ ... people should take ownership of their water supplies to be responsible. Everyone should work together to look after water. Report any leaking taps ... must work together to support good water management (Choiseul -RV-M).

## DISCUSSION

A guiding principal of much of the PaCWaM+ research is the idea that behaviour which has 'organically' developed at the community level – e.g. instances of self-help, collective action, innovation – provide important lessons for development practitioners. This is, in good part, what we mean by operationalising a strengths-based networks between town and village – a local example of self-supporting behaviour – might be accessed via Provincial Day activities to share information about what good community water management entails.

### Provincial Days as a means to access existing social networks for advocacy on community water management

Solomon Islands provincial celebration days are a catalyst for focusing attention on development needs and priorities; both the Isabel and Choiseul Provincial Day celebrations were strongly focused on rural development issues.

This research on two Provincial Day outreach activities found that these forums were an appropriate and effective venue to socialise and disseminate community water management messages. In terms of **message medium**, the videos (especially) proved to be highly popular, amongst all age groups and genders, with many people suggesting that they should be shared on social media. Interestingly, males found the handouts to be of slightly more interest / value than females. If this were supported in a larger and more representative sample it may suggest that men desire more instruction-orientated information that they can refer to in the future.

GMSA (2017) have identified five principles of **behaviour change messaging** - "Actionability/Call to action; Clarity; Usefulness; Accuracy; and, Appropriateness/Relevance". Elsewhere, Michie et al. (2011) identify three of the key **drivers** of behaviour change as motivation and capability, which are internal conditions, and opportunity, which is an external condition (Michie et al., 2011). The "Water is Everybody's Business" videos were designed around these messaging principles and behaviour change drivers.

Our monitoring demonstrates that we have been successful in engaging with each message principal, with our overarching theme of "Water is Everybody's Business" clearly resonating with people. Although a small sample size, the follow-up surveys also suggest that people recalled many of our key sub-messages – e.g. "everyone must work together" (cooperation), "we

must all contribute to support..." (financial contributions) and "take ownership" (self-reliance).

We would argue that given the presence of government ministries and CSOs at the Isabel event, **there is merit and precedent for government and CSO actors involved in the WASH sector to consider participating in some Provincial Day events; they are an effective way to reach a large number of people in a short time span and at minimal cost.**

The "Sanitation and Water for All" global initiative recognises that water and sanitation need to be a higher political priority.<sup>6</sup> Our Phase 1 research demonstrated that at the community-level water and sanitation were, generally, a low priority. Provincial Days provide an avenue through which rural community water issues can be elevated in the 'public sphere' and government and CSOs can demonstrate their commitment to the sector. Sector visibility, support to citizens and improved service delivery can help reframe community priorities and build motivation. Priorities and motivation are coupled, with motivation a key requirement for behaviour change. What 'good' community water management looks like needs to be raised to a higher priority in the public's mind. This speaks to the need for transformative WASH in that a more comprehensive, innovative and integrated package of WASH interventions is required than is currently the norm.

Of course, simply **socialising water management** as a domain of greater value and concern is not going to drive substantive change on its own – it is certainly no silver bullet. But actionable, clear, useful, accurate, and appropriate messaging, **integrated with broader sector activities and interventions**, can contribute to raising both political and public interest in rural community water management. This is an essential component of driving the behaviour and policy change required to ensure safe,

reliable and sustainable rural water services in the Pacific Islands going forward.

### Social networks and the moral economy in PICs

The Solomon Islands Pijin term '*wantok*' [lit. "one-talk"] refers to those who share kinship ties but also denotes wider patterns of relationships that link not just families but also expresses island, provincial, national, and sub-regional identities (Nanu, 2011:32). Along with other Oceanic concepts such as [in Fiji] *solesolevaki*, *soi*, and *kerekere*, these terms point to the centrality of family (kinship), place, networks, obligation and reciprocity in local life-ways and are critical variables of local social capital.<sup>7</sup> Importantly, this social and moral economy is not so much collective or communal but rather selectively relational - a very important difference.<sup>8</sup>

Given the strong demographic, socio-cultural and economic ties between town and village evident in both Solomon Islands and Fiji it **made sense to explore if and how these extant social networks are being used to support rural community development aspirations, including community water services.** Our research findings have broadly supported our assumption that social networks are already being used, to some degree, to improve rural community water outcomes.

Research on social networks and water management from outside the region suggest that greater informal social networks create more robust and adaptive water management systems (e.g. Larson, et al. 2013; Salajegheh, 2020) and facilitate improved cross-scale interaction in watershed governance (e.g. Nabiafjadi et al., 2021; Rathwell and Peterson, 2012). However, there is a dearth of research on social networks and water in the Pacific Islands context. Given our objectives and limited resources we did not undertake a formal social network analysis (SNA). More in-depth empirical research using a formal SNA methodology (e.g. Borgatti



Nixon Panda and Joe Hagabore, Choiseul Provincial Day presentation

et al., 2009; Bodin and Crona, 2009) would be constructive.

In Fiji, our data suggests that social networks between rural and urban areas facilitates adaptive capacity in the face of shocks (extreme weather, pandemics, other emergencies), at both the household and community-wide level (Love et al., *in review*). There was less evidence of this in Solomon Islands at the community-wide level, although that is not to say it does not exist. Despite having many similarities – e.g. out-migration, urbanisation, domestic remittance trends (see Table 1) – there are significant differences between the two countries that shape social networks and how they operate.



SINU team at the Isabel Provincial Day

Importantly, the example from Galoa (Box 1 and Figure 2) elucidates that social networks operate across not just meso- (national) and macro- (international) levels but also at the micro-proximal (intra-Provincial) level. Galoa women and village leaders utilised social networks and cultural protocols to not only raise funds for the water system but also to facilitate access to a water source on Kadavu that traverses multiple *mataqali* (clan) lands.

***The example from Galoa reminds us that social networks operate across not just urban-rural divides but can also be critical at the rural to rural level.***

The greater formalisation of social networks in Fiji relative to Solomon Islands is exemplified in: the rural / urban 'hybrid' village development committees (VDCs) in Fiji; the more structured, broader and substantive nature of fundraising [*sol/i*] and self-help [*solesolevaki*]; and, the manner in which social media – in the form of place-based Facebook groups – facilitates and enhances these

connections and development outcomes. Numerous examples of VDCs and Facebook groups galvanising around WASH-related development needs have been identified (Love et al., *in review*).

Whilst our Phase 1 analyses in Solomon Islands is far from exhaustive, relative to Fiji, social networks are strong but less structured and more focused on household / familial levels than the wider 'village

community'. We found little evidence to suggest that urban-rural networks are actively used to support improved rural community water outcomes. This is likely due to a number of comparatively unique structural factors; e.g. land tenure particulars, the high presence extractive industries (logging and mining), weaker formal governance regimes, and contrasting socio-cultural and economic characteristics (e.g. Solomon Islands is ranked 'Low' in the

Human Development Index whilst Fiji is rated 'High') (UNDP, 2020). Constructive micro-proximal linkages such as those between Galoa and Wailevu in Kadavu Province are unlikely to be common in Solomon Islands due to a range of factors, including the high volume of disputes fuelled by land rents.<sup>9</sup>

Regardless, this is not to say that WASH-related development activities via informal social networks are totally absent in Solomon Islands or that such linkages will not develop in the future. Provincial Day celebrations were identified as a potential conduit for leveraging social networks precisely because they are reflective of the informal and dynamic networks extant in the country, providing a fleeting but tangible intervention point where some of the disparate components of these networks materialise. Note that there is no intention to overtly engineer or formalise these social networks.

In summary, engaging social networks for improved community water management must be contextually specific. In Fiji, there is a socio-historical tendency for

formalising customary governance processes, whilst in Solomon Islands there is more socio-cultural diversity and it is characterised by a much more 'fluid' governance structure and the state is largely absent in rural areas (cf. Aswani, et al., 2017; Sinclair and Allen, 2016; Steeves, 1996). This means that engagement by WASH actors must be tailored to each context. In Fiji, more structured and targeted engagement is more likely to be welcomed and effective, whereas in Solomon Islands tapping into informal networks through social media and events such as Provincial Days are likely to be more appropriate.

Nevertheless, there are informal urban place-based common interest associations in town in Solomon Islands which do focus on supporting village development aspirations, as well as instances of village council's that have members who are not resident in the village.<sup>10</sup> However, this seems to be the exception more than the norm but may change over time, if: urbanisation further intensifies (as predicted); socio-economic particulars in Honiara improve, and; water becomes a greater community priority. The point is, different approaches are required in different countries, possibly even in different Provinces - there is no "one-size-fits-all" approach that can be neatly scaled-up across the region.

We know from our wider research that **poor management of water is the key contributor to low system sustainability and breakdown**, and that more community-level training and awareness is required. However, in both SI and Fiji government WASH sector staff struggle to address this shortfall due to resource constraints. Perhaps most importantly, our research has identified that it is not only **technical support** that communities require but also **managerial support**, specifically:

- **Raising and managing funds for maintenance**
- **Water committee roles and responsibilities**
- **The importance of water committee membership diversity**
- **Engaging better with the wider community**
- **Everyone – not just a water management group – have a role to play in looking after their water supply system.**

Some of these topics are exactly what our videos, flyers / hand-outs and implementation guides modules seek to address (<https://www.watercentre.org/research/research-impacts/pcwm/>). **The value of Provincial and National celebration days is that they bring the state and informal social networks together.** The participation of WASH sector agencies at such occasions not only

promotes active citizenship in the water space but also demands greater responsibility and accountability from development institutions, ideally driving more effective service delivery (cf. Cox, 2009).

## CONCLUSION

It is clear that the 'community' does not simply mean the people residing in the village or settlement in rural areas. Given the demographic particulars and strong linkages in evidence (Table 1 and Figure 2), many urban dwellers in Solomon Islands and Fiji warrant participation in rural development conversations because they are part of the 'whole community'. Moreover, they often have skills and insights that can, and do, assist with enhancing rural development outcomes. Many urban dwellers regularly return to their rural homes, contribute to fundraising and provide other forms of assistance (e.g. writing project proposals). They are often agents of influence more broadly (e.g. many of the 'new' Christian denominations one finds in previous singular denomination communities were brought by kin from town or elsewhere). As such, **urban-based residents stand as potential WASH allies** who can further assist in disseminating and reinforcing targeted information / messages; especially the non-technical type identified as critical to supporting improved community water management outcomes.

In Solomon Islands, people are generally more concerned with livelihood and wider social challenges than they are with water and sanitation. For this to change, water and sanitation has to become a more salient community priority. The reality is that, for many people, water maybe life but this does not translate, in practice, to proactive and effective community water management. That is, to the socio-culturally embedded norm that looking after water is "everyone's business".

The cultural, historical, geographic and demographic particulars of the Pacific are variable and globally unique; development solutions need to be similarly unique. Identifying and working with extant local systems, whilst not without its challenges, is worthy of greater attention by WASH actors. To engage with the 'whole community' and further push water and sanitation into the mainstream of Pacific Islands political and public life means engaging with people in town, in the village, and the diaspora. Social media, formal and informal social networks and groups, and events such as Provincial and National celebration Days are a good way for WASH actors to arouse interest and drive improvements in rural community water management.

## RECOMMENDATIONS

1. Working with the grain to leverage existing social networks to advocate for and influence community water management is strongly recommended. Social networks that connect villages to towns are particularly relevant because town is where WASH enabling actors are located and able to easily mobilise. To support this, it is useful to identify opportunities to access such village-town networks.
2. There is merit and precedent for government and other WASH actors to seriously consider participating in some Provincial Day events; they are an effective means by which to reach a large number of people – many of whom are interested in rural community water management and WASH - in a short time span, at low cost and minimal effort.
3. For leveraging social networking approaches to be most effective, it is helpful to harmonise key messages across all actors. Solomon Islands WASH actors should consider cooperating on key simple messages, such as those used here.
4. The format of activities at events such as Provincial Days should draw on social marketing approaches rather than conventional educational models. Videos and flyers, in local vernacular and drawing on a strength-based approach using local examples, is highly recommended.
5. More in depth empirical research, utilising a more formal SNA approach, is warranted in the Pacific. This should ideally draw on conventional SNA methodology (e.g. Borgatti et al., 2009; Bodin and Crona, 2009) but also be broad enough to incorporate considerations of how the structural properties of networks shape sustainability and development outcomes (cf. Henry and Vollan, 2014).



*Sumate, north-west Guadalcanal, Solomon Islands*

## END NOTES

<sup>1</sup> Data drawn from our socio-economic households surveys undertaken as part of our formative Phase 1 research activities, see Love et al. (2020, 2021a).

<sup>2</sup> Examples of 'other things' include paying for school fees, mobile telephone credit, and (Fiji only) electricity bills. These can be easily paid by people in town.

<sup>3</sup> Kava is a mild narcotic beverage (analgesic and calnative) made from the roots of *Piper methysticum* Forst. F., *Piperaceae*. It is pounded, grinded or otherwise masticated in water, filtered, and drunk both ceremonially and for pleasure (cf. Singh, 1992).

<sup>4</sup> Whilst relatively underexplored in WASH there has been a growing number of research and practice programmes utilising social network analysis. For SNA in the context of water management, see for example: Larson et al., (2013), Rathwell and Peterson (2012), Salajegheh et al., (2020). USAID have applied social network analysis in their development work through their 'WASH systems learning partnership' (USAID, 2018). For a broad review of networks and their relevance to sustainable development, see Henry and Vollaard (2014).

<sup>5</sup> Ethics approvals were granted from Griffith University (HREC 2018/793), The University of the South Pacific (Dr Sarah Pene/2018), Solomon Islands National University (SINUPEC 02/18) and the Ministry of Health (HRE037/18).

<sup>6</sup> Sanitation and Water for All (SWA) is a multi-stakeholder partnership aiming to initiate high-level political dialogue and coordinating and monitoring the progress of SDG 6 'To ensure availability and sustainable management of water and sanitation for all' of the 2030 Agenda. Over 100 partners, including governments, civil society and development partners, work together as part of SWA.

<sup>7</sup> Social capital is a complex and debated concept that points to a (largely) intangible social variable that can positively and negatively influence development inputs (Dhesi, 2000). Precise definitions vary but for our purposes social capital can be understood as a bundle of resources that are embodied in relations between people (Coleman, 1990) and consists of various socio-cultural particulars, including: systems of mutuality/reciprocity, networks, values, norms and trust (Putman, 1993).

<sup>8</sup> The role of culture and the norms of reciprocity and obligation in development is widely debated in the PICs, by locals and academics alike. See further: Delaibatiki (2015), Fareilly & Vudiniabola (2016), Kaidravuni (2017), Movono & Becken (2018). For a range of critical perspectives focused on *wantokism* in Solomon Islands, see Brown (2007), Boege et al., (2009), Fraenkel (2004b), Hameiri (2007), Haque (2012), Moore (2004), Nanau (2011), Morgan (2005), Schuermann (2013) and Steeves (1996).

<sup>9</sup> The *wantok* system, combined with land rents and the Rural Constituency Development Fund, have nourished a patron-client relationship that pervades both politics (Fraenkel, 2004)

and development (Cox, 2009). Voters have come to judge their MPs on how well they deliver private or localized public goods to their constituents (Wood, 2014). The demand sharing aspect of *wantokism* can also have familial disadvantages, for example impinging on women's livelihood and wider well-being in Honoria (Evans, 2015, 2017a, 2017b). For a commentary on small business challenges, see Solomon Times (2008).

<sup>9</sup> There are far less disputes over land and chiefly title in Fiji relative to Solomon Islands, due to the lack of extractive industries in Fiji relative to Solomon Islands (e.g. logging and mining rents (cf. Allen, 2017; Hviding 2015) and relatively less disputes over land and chiefly titles, partly due to the fact that the British codified iTaukei land and chiefly titles before independence.

<sup>10</sup> Gounabuse had a structured (but not registered) 'Gounabuse committee in town' (based in Milestone, east Honiara) who regularly assist in fundraising and in other ways. For example, during Phase 1 fieldwork the town committee had organised rations for the contractors who were building the village community hall. They were referred to, by one respondent, as the "Second Gounabuse community" (KII-G, WCR-F). In Manakwai village, a key village emigrant of influence employed by the SIG in Auki has been instrumental in formalising the Manakwai 'Baboa House of Chiefs' and drafting and registering the village constitution (Love et al., 2021a: 48)

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