



Deposited via The University of Leeds.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/121026/>

Version: Accepted Version

---

**Proceedings Paper:**

Barrington, DJ, Shields, KF, Saunders, SG et al. (2017) Some lessons learned from engaging in WaSH participatory action research in Melanesian informal settlements. In: WEDC Knowledge Base. 40th WEDC International Conference, 24-28 Jul 2017, Loughborough, UK.

---

© This is an author produced version of a paper published in WEDC International Conference.

**Reuse**

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.

**40<sup>th</sup> WEDC International Conference, Loughborough, UK, 2017**

LOCAL ACTION WITH INTERNATIONAL COOPERATION TO IMPROVE AND  
SUSTAIN WATER, SANITATION AND HYGIENE SERVICES

**Some lessons learned from engaging in WaSH  
participatory action research in Melanesian  
informal settlements**

*D. J. Barrington, K. F. Shields, S. G. Saunders, S. Meo,  
S. Sridharan, R. T. Souter & J. Bartram (Australia & UK)*

PAPER 2643

---

*In Melanesian countries there has been a large flux of people from rural to urban and peri-urban areas, resulting in an increased number living in informal settlements. These settlements often lack connections to mains water and sewerage lines and formal solid waste collection. Our project used a participatory action research (PAR) approach to work in partnership with informal settlement communities and enabling actors to achieve the self-determined WaSH conditions which participants felt would improve the well-being of those living in informal settlements. Because the PAR approach encourages reflection and adaptation, we learned lessons that were incorporated into the design of ongoing and future processes, and this paper presents five such lessons which we judge to be of practical use for WaSH enabling actors.*

---

## **Background**

In Melanesian countries such as Fiji, Vanuatu and Solomon Islands there has been a large flux of people from rural to urban and peri-urban areas. The low affordability of urban housing, combined with a complex and often conflict-prone land tenure system has meant that many of these people end up living in informal settlements (Water and Sanitation Program, 2015). Residents have different ethnicities and religious denominations and generally earn little or no income. Because the settlements are often on the boundaries of city council and provincial administrations, they tend to fall into a void between urban and rural policies, which complicates land-tenure. This creates challenges to the provision of water, sanitation and hygiene (WaSH) services, and as such, most informal settlement dwellings lack connections to mains water and sewerage lines and cannot access council solid waste collection programs (Water and Sanitation Program, 2015). In addition, the precarious tenure status often means that households do not see value in investing in their own onsite water and sanitation services, such as septic systems. We aimed to work in partnership with impoverished urban and peri-urban informal settlement communities and local enabling actors (people in civil society, external support agencies, community governance structures, utilities, national and local government, the private sector, and academia) to achieve the WaSH conditions which participants felt would improve overall well-being (Barrington et al., n.d.).

## **Method**

We engaged in participatory action research (PAR), in which researchers and the other participants worked together to define a problem, design a solution, and implement change (Reason and Bradbury, 2001). We selected two informal settlements in each of the cities of Suva, Fiji; Port Vila, Vanuatu; and Honiara, Solomon Islands. Residents of each settlement identified a desire to improve their WaSH situation. We also worked in partnership with WaSH enabling actors. Through a series of participatory activities over a three year period, we explored the motivations underpinning current use of, and future aspirations for, WaSH products and services among participants from informal settlements. We also investigated how access to and

use of WaSH products and services influences individual and collective well-being. With enabling actors we mapped the functions they perform, and identified gaps in their policies and actions, particularly those regarding informal settlements. Together we worked to create conditions under which sustained, self-determined WaSH improvement could occur.

### **Lessons learned**

Because the PAR approach encourages reflection and adaptation, we learned lessons that were incorporated into the design of ongoing and future processes. Below we discuss five lessons which we judge to be of practical use for WaSH enabling actors.

#### **Consider all of the different communities within an informal settlement, and how working with members of each in parallel or in sequence may improve well-being**

In the early phases of our project we attempted to conduct our project across entire informal settlements. Our introduction to residents was generally through one or a few representatives of a church or local committee that was or had been connected to our partner Civil Society Organization, Live & Learn Environmental Education (LLEE).

A community is a socially networked group of people, so within a settlement there can be one, several or many different communities, including different types of communities (e.g., church groups, ethnic groups). We learned to recognize that our entry point was only a member of one or some of many communities within each settlement. Despite repeated attempts to recruit a representative group of participants from across the settlement, we struggled to engage with individuals not involved in the day-to-day activities of the communities of our entry point, so our participants often did not represent all of the ethnicities, religious denominations or geographical areas within the settlement, and consequently represented only a fraction of its population.

We learned that if we wanted to work across an entire settlement we would need to build our own relationships with the various, often overlapping, communities within that settlement. However, we also realised that in some informal settlements it can be useful to begin by working with a single community and then reaching out to other communities as the project progresses. This is contextually dependent; it can be helpful to show momentum before engaging with residents from outside the entry point's community, but it may also result in some anger towards researchers and practitioners that you chose to work with a particular community first.

#### **Act as a bridge to assist other participants in understanding one another's situations and improving WaSH conditions**

Early in the project we worked separately with enabling actors and participants from informal settlements to understand their WaSH conditions and aspirations. From this we learned that enabling actors rarely understand the living conditions of participants from informal settlements and that participants from informal settlements misunderstand the roles of enabling actors, policies and regulations. To remedy this we created 'bridges' between participants from informal settlements and enabling actors through exchange visits, where participants from informal settlements led enabling actors on tours of their settlement (Photograph 1), and by organising a dedicated workshop for enabling actors to explain their organisation's mandate. This was effective where enabling actors committed time to visit informal settlements and understand the social and technical constraints facing residents when attempting to improve WaSH.

Where enabling actors took a top-down approach to 'telling' residents what their mandate was, without dialogue, but where most WaSH improvements would require the involvement of enabling actors, there was limited opportunity to enhance well-being through PAR. However, where enabling actors engaged participants from the informal settlements in dialogue around how their organisation's mandate could be applied to WaSH in informal settlements, participants were able to work together to improve poor WaSH conditions. Part of our intent with regards building this bridge was that when our research project officially ended, WaSH improvements would continue in our absence.



**Photograph 1. Exchange visit**

Source: D.J. Barrington

**Communicate the participatory action research process and act in a neutral role to facilitate it**

The PAR approach was new to many project participants, including some of the university researchers and local CSO staff. A benefit of PAR is that activities are not prescribed, allowing adaptation as it progresses. However, this was difficult to communicate, particularly where participants from informal settlements were conditioned to a hand-out culture with regard to WaSH products and services. Some participants from informal settlements could not fathom, or did not want to be involved in, a program where they could determine the processes that could lead to improving their WaSH situation. We reiterated the importance of them defining the research problem and solutions for themselves, but often struggled to truly communicate that there were limited boundaries to the process and that participants could, and often should, think outside the norm.

We were sometimes viewed by participants as ‘technical experts’, and struggled with how to act in this role when asked for our opinions on processes and technologies. To address this, we learned that it was useful for us to introduce concepts (e.g., sanitation marketing) and technologies (e.g., mobile toilets) with which participants may not have been familiar, but we did not advocate one over another. We did however express doubts when contextually inappropriate technologies (e.g. septic tanks in tidally flooded settlements) were suggested, explaining why such systems would not work. We also assisted where possible in a bridging role where participants from informal settlements identified non-WaSH aspirations (e.g. supporting participants from one settlement in lodging a request for a zebra crossing to the Road Traffic Authority). We acted in a neutral, active role to facilitate participants in achieving improvements in well-being in ways that they felt were most appropriate.

**Be aware of power dynamics at various levels and overcome them through working with directly enabling actors and natural leaders**

We were aware from the outset that there were real and perceived power imbalances between participants from informal settlements and enabling actors. In two countries, we were encouraged by the amicable relationships that rapidly developed among participants through the workshop setting. In the third country the power divide between participants from informal settlements and enabling actors was generally not overcome, leading to resentment of some enabling actors by participants from informal settlements. In this case, the enabling environment was sometimes actively disabling, making it difficult for participants from informal settlements to move forward with their own actions to improve WaSH. We learned that it was more useful to work with directly enabling actors, even if they were in the minority, than to engage a larger number of enabling actors who were in fact disabling. Directly enabling actors were able to assist participants from informal settlements in initiating at least small WaSH improvements.

Other power dynamics, such as those between people of different genders, ethnicities, and socio-economic status within the settlements, became evident to us over time. A power dynamic of particular interest was that informal settlements often have committees, and committee members hold power over other residents. In some cases this power is used benevolently, for example to fairly distribute WaSH products and services (Photograph 2), whereas in others, this power is used to further a personal agenda, such as using money that

has been donated for a communal building to construct one's own house. We learned that it was useful to invest time in engaging and developing relationships with 'natural leaders', those who were attempting to improve well-being in the settlement, and who were respected by residents (Crocker et al., 2016). Some natural leaders did not hold committee positions but initiated changes for the greater good of the settlement, often by involving, and empowering, less powerful individuals.



**Photograph 2. New water connections at an informal settlement, fairly distributed by a natural leader**

Source: S. Meo

### **Respect participants' preferred level of commitment and express appreciation**

Some individual enabling actors were dedicated to improving WaSH in informal settlements, and some contributed personal time to the project. Some participants from informal settlements could not participate in formal PAR workshops due to work or family commitments, but demonstrated dedication to the project's goals through involvement in activities that were planned during workshops, such as community clean-ups.

We spent many hours trying to engage other enabling actors and residents from informal settlements in the project. Some did not engage at all whilst others attended workshops because their organization insisted they be there, or because they expected to be compensated for their time. We did cater for all workshops, normally by hiring residents of the informal settlements themselves to prepare the food and drinks, and provided funds to pay for transport of participants to and from workshops when they were not conducted within the informal settlements, but we did not pay participants for their involvement in project activities. This angered some participants from informal settlements, and meant that we could not secure the involvement of some enabling actors. We learned that it was unhelpful to dedicate time trying to engage with uncommitted and disinterested individuals and organisations, and that we should instead work within the time and responsibility boundaries of those who were keen to be involved. This included respecting their time, rather than waiting for uncommitted individuals to arrive, as well as making an effort to engage with dedicated participants who could not attend formal sessions. We found that individuals appreciated efforts to acknowledge their contributions, whether through providing certificates (Photograph 3), thank you letters, photographs from previous activities, or opportunities to be involved in developing project outputs.



**Photograph 3. Workshop participants with attendance certificates**

Source: K.F. Shields

## Conclusions

We learned many lessons on applying PAR, and participatory processes more generally. Many were recognized months or years into the project, and we believe that we could have improved our work overall, and the outcomes for participants, had we known them in advance. As such, we have integrated the activities from our project, including these lessons learnt, into an open access guidebook which, although developed in the Melanesian context, we hope can be valuable to any WaSH researchers or practitioners attempting to improve well-being in informal settlements through a participatory approach (Barrington et al., 2017). Several policy and programming briefs are also available.

---

## Acknowledgements

This research was funded by the Australian Government under the Department of Foreign Affairs and Trade (DFAT) Development Research Awards Scheme, project number: 201200898. The project was managed by International WaterCentre. The authors would like to thank the communities and enabling actors we have worked with for their enthusiasm and involvement in this project, as well as the assistance of our local staff from Live & Learn Environmental Education and University of the South Pacific. This research received ethics approval from Monash University, the University of North Carolina, the University of the South Pacific and the relevant authorities in Fiji, Solomon Islands, and Vanuatu.

This project has included work completed by Semisi Meo towards the attainment of a Doctorate of Philosophy.

---

## References

- BARRINGTON, D.J., BARTRAM, J., MEO, S., SAUNDERS, S.G., SHIELDS, K.F., SOUTER, R.T., SRIDHARAN, S., WASH ENABLING ACTORS & INFORMAL SETTLEMENT COMMUNITIES. 2017 *Fostering water, sanitation and hygiene (WaSH) marketing exchanges using participatory processes: a guide for working with residents of informal settlements in the Pacific*. International WaterCentre: Brisbane, Australia.
- BARRINGTON, D.J., SOUTER, R.T., SRIDHARAN, S., SHIELDS, K.F., SAUNDERS, S.G., BARTRAM, J. *Sanitation marketing: a systematic review and theoretical critique using the capability approach* (in prep).
- CROCKER, J., ABODOO, E., ASAMANI, D., DOMAPIELLE, W., GYAPONG, B., BARTAM, J. 2016 *Impact evaluation of training natural leaders during a community-led total sanitation intervention: a cluster-randomized field trial in Ghana*. *Environmental Science and Technology*, 50(16), pp. 8867-8875.
- REASON, P., BRADBURY, H. 2001 "Introduction: inquiry and participation in search of a world

worthy of human aspiration”, in: P. Reason and H. Bradbury, H. (eds) *Handbook of Action Research*. Sage: Thousand Oaks, CA, USA, pp. 1–14.

WATER AND SANITATION PROGRAM 2015. *Delivering water and sanitation to Melanesian informal settlements: Solomon Islands, Fiji, Vanuatu, Papua New Guinea*. World Bank: Washington DC, USA.

---

#### **Note**

A variety of outputs from this project are available from <http://www.watercentre.org/portfolio/pacific-wash-marketing>

---

#### **Contact details**

*Dr Dani Barrington is a Research Fellow in Water Engineering for Developing Countries at Cranfield University, and was Principal Investigator for this project, jointly appointed by Monash University and the International WaterCentre. Dani is passionate about working at the nexus of technology and society, particularly investigating how appropriate technologies, community-led programs and public policy can improve well-being outcomes.*

Dr Dani Barrington  
School of Water, Energy and Environment  
Cranfield University  
Cranfield  
Bedfordshire MK43 0AL  
United Kingdom  
Tel: +44 7743 508 140  
Email: [d.j.barrington@cranfield.ac.uk](mailto:d.j.barrington@cranfield.ac.uk)  
[www.cranfield.ac.uk/people/dr-dani-barrington-15955455](http://www.cranfield.ac.uk/people/dr-dani-barrington-15955455)

Monash University and International WaterCentre  
L16, 333 Ann Street  
Brisbane 4000  
Australia

---