

Health hardware case study: Utopia Homelands

Aaron Clifford, Environmental Health Central Australia, NT

Before I commence, I would like to acknowledge the Traditional Owners of the land on which we are meeting. I pay my respects to their Elders, past and present, and the Elders from other communities who may be here today.

Good afternoon, my name is Aaron Clifford, and as discussed in my previous presentation, I am the Acting Coordinator with the Environmental Health team in Central Australia. Today, I am going to talk about project management in Central Australia using a case study regarding the remediation of endemic plumbing failure in the Utopia Homelands.

To begin my presentation, I would like to discuss those considerable constraints associated with the multitude of Indigenous communities in Central Australia affected by significant remoteness, limited human and financial resource availability, and the constant deterioration of community assets. Following on from this, I would like to talk about investment and evaluation within these communities and then communicate these issues to the target region of this case study, the Utopia Homelands. An example of asset deterioration will include discussion of endemic plumbing failure within Utopia. Then, Environmental Health's response to the issue will be highlighted, including a multidisciplinary collaboration by government and non-government organisations to sustainably improve conditions within the region.

So, as you can imagine, within remote Indigenous communities, there are considerable constraints associated with vast distances, harsh remote environments, limited human and financial resource availability, and the constant deterioration of community assets; and obviously these constraints require a large amount of investment.

Just to put this investment into context, an estimated annual investment of more than \$3 billion is allocated to remote and very remote Indigenous communities. Obviously, working within the constraints of remote environments requires considerable collaboration with a range of stakeholders.

The finance and management of resources has always occurred through three major stakeholders: the Commonwealth Government, the Northern Territory Government and local government councils. Cross-pollination between them has always been and continues to be complex. Of fundamental consideration is local governance. This involves Aboriginal communities that lie on 'Aboriginal land'. In the Northern Territory, this can mean different things. For example, the term is most generally used to describe freehold land granted under the Aboriginal Land Rights Act. However, there are also areas titled 'Community Living Areas' which are excised from pastoral leases.

In each instance, it is legislated that within Aboriginal communities (lands), there must be an emphasis on local governance. Importantly, this understanding provides a component of environmental health consultation. In January 2014, the NT Government changed the Local Government Act to introduce Local Authorities across all major communities. These local boards have been established to support local governance and leadership by local community members. Among a range of considerations, this includes ensuring: inclusivity with the decision making process, through an awareness of what is happening and planned for their

community; and ensuring having input into planning within communities, such as delivery plans, Shire Plans and Regional Management Plans. This is also true of Environmental Health's role within the public health spectrum, which ensures that local governance is empowered.

Understanding processes of local governance is essential, because within Indigenous communities, one of the first things Environmental Health Officers endeavour to achieve is to undertake a profile of community infrastructure, key services and the stakeholders who facilitate these services.

Like all towns they have infrastructure requirements, relating to providing roads, power, water, sewerage, education, primary health care access, employment opportunities, and recreational opportunities. Typical to Environmental Health, our team, looks at key infrastructure within our legislative boundaries (i.e. through our various legislation such as the Public Health and Environment Act and Regulations, and various infrastructure-related guidelines and Codes).

As you can imagine, public health issues are related to solid waste, sewage, potable water, housing for health, food, dust mitigation, storm water mitigation and so on. Importantly, we work to reduce risk, and due to the constraints of Indigenous environments we form collaborative approaches through building strong relationships with each community.

Naturally, Environmental Health works with the community Shire Services Manager and their operations staff, such as Essential Service Officers and municipal workers, to gather information. Environmental Health also works with other public health agencies in regard to the provision of health promotion activities. Significantly, we also endeavour to understand the cultural systems, ensuring that the Environmental Health service is culturally competent.

Therefore, it is essential to establish relationships with local leaders, such as Traditional Owners, Elders and other members of the community. Part of this process involves attending and presenting at Local Authority meetings, where environmental health items can be recorded within minutes and voted upon by key Indigenous leaders.

Obviously, the process of local governance and participatory processes are essential. For instance, Aboriginal residents occupy 80 of the 100 houses; and only 10.2% of people speak English at home.

It is also important to understand those transportation constraints that affect service delivery. Utopia is located along the Sandover Highway. The Sandover consists of 545 km of rough, corrugated dirt roads only accessible by 4WD. In summer, temperatures reach above 40°C and the Sandover is impassable after relatively small amounts of rain. Water build-up can provide significant travel constraints. Part of preparation for working out bush is the need to monitor the Road Report Website and Bureau of Meteorology. Also, service providers cannot drive at night due to a large population of feral horses, donkeys, dogs, camels, kangaroos and dingoes. Accessibility issues also cause trades professionals to charge \$2 to \$6 per km travelled in addition to their hourly rates.

These constraints require massive funding, and subsequently the local Council has a \$2.3 million deficit. Therefore, in regard to project development, there are numerous organisations competing for funding. Partly, this is available through the

Indigenous Advancement Strategy investment of \$5.9 billion, just over half of which is allocated towards remote Australian communities. However, there is now a strong focus on 'Return for Investment' where continuous quality improvement is properly measured through adequate needs assessment processes and key performance indicator design.

The paper titled 'Mapping the Indigenous program and funding maze' provided by the 'Centre of Independent Studies' identifies that significant improvement is required regarding the administration of Indigenous programs and funding. Particularly, it indicates that less than 10% of the current 1082 programs are being properly evaluated. Subsequently, there is a lack of comparative performance data and over-reliance on anecdotal evidence; and most importantly, it found that there is limited Indigenous input into program design and delivery.

Enter the Health Community Assessment Tool. This tool, aka HCAT, was originally developed by Dr Elizabeth McDonald from the Menzies School of Health Research. It was developed for those involved in planning, service provision and more generally promoting improvements in community social determinants of health.

HCAT is a tool to measure, monitor and evaluate key social determinants of health at a community level in Australian rural and remote communities. The key here is the participatory consultative process with community members and key stakeholders. Its assessment process allocates considerations associated with the social determinants of health and through the use of measurable indicators, its process is designed to support potential continuous quality improvement programs. Importantly, HCAT provides focus on critical health infrastructure, and this partly inspired the focus on plumbing issues in Utopia by the Environmental Health Program.

The focus communities of this presentation are those of Utopia. Utopia lies within the Barkly region on Aboriginal-owned land called Urupuntja. It is approximately 3 hours' drive from Alice Springs and, as 90% of the population of 483 people are Indigenous, its local governance is supported through the Urupuntja Aboriginal Corporation.

Utopia comprises of a larger community, Arlparra, with a population of 483 people, and 16 homeland communities with populations that range from 20 to 50 people who reside in 91 Aboriginal houses. Anmatyerre and Alyawarra are the most common languages spoken in this area. Currently, Utopia's municipal services are funded by the Department of Local Government & Community Services, who contracts to service providers that are currently operated by Central Desert Regional Council. However, at the time of this presentation's project focus, the contractor was Urupuntja Aboriginal Corporation, with whom Environmental Health significantly collaborated.

The size and scope of service delivery requirements in Utopia have made service provision particularly challenging; and this was reflected through Environmental Health, which found systemic failure of plumbing systems across all 16 homelands.

The plumbing systems in the homelands use water from onsite bore systems. Waste water is treated by onsite septic systems, typically involving Atlantis absorption trenches.

The geographical location across Utopia, the limited access to funding, very poor maintenance schedules and lack of maintenance program in Utopia created many barriers to basic

plumbing maintenance being undertaken in a timely manner. Chiefly, this resulted in numerous minor issues across 91 homes progressing into larger, more costly items, and created high risks of infection and disease due to the length of time they remained unresolved. So, these findings by Environmental Health naturally followed onto specifically looking at what quality control and maintenance programs were available in Utopia. We also looked at aspects associated within the Housing for Health spectrum.

Within the investigation, Environmental Health started promoting to Urupuntja Corporation aspects associated with the Housing for Health spectrum, such as components associated with access to adequate water supplies and sanitary drainage; including access to bathing, washing clothes and removing waste water. As Urupuntja Aboriginal Corporation were contracted by the Barkly Regional Council to provide services they agreed to fund thorough investigations across all 91 homes utilising the services of a plumbing company.

To support ongoing processes, the Environmental Health team began to establish a working group, facilitated by myself. The initial process involved meetings with the Service Coordinator for Urupuntja Aboriginal Corporation, Director of Infrastructure and Grants Manager from Barkly Regional Council; and the Coordinator and Manager from Environmental Health. Through this process, we were able to establish input from the local traditional owners of each homeland.

The initial consultative stage involved Environmental Health reports, which indicated the initial findings of failing systems, the associated health risks and the legislative ramifications. Through this initial consultative process, Urupuntja did provide funding to employ a plumbing business to provide a complete audit of the homelands.

The audits were thorough and, at great expense, took several months. During this process simple plumbing fixes occurred, such as swapping out toilets and shower heads, unblocking drains, and simple connections to water. The initial plumbing reports from the homelands identified endemic plumbing issues, a poor history of maintenance follow-up, very poor Code compliance and in many cases failure of even the most basic plumbing set-ups. Joint inspections were also undertaken by Environmental Health to assist with regulatory understanding and to reinforce the need to reinstate Code compliance. So let's take a look at some of the issues found through the audit process.

One of the main issues with the plumbing across all homelands was very poor maintenance schedules, greatly affected by a lack of funding. However, this was made substantially worse by the installation of inappropriate plumbing systems, very poor Code compliance; and continuing endemic failure of sewage treatment systems.

There were other contributing factors as well, such as: a large amount of vandalism; significant damage to external plumbing by increased numbers of feral horses and donkeys sourcing water; the installation of plumbing systems by private organisations, who at various stages no longer took responsibility for plumbing upkeep; and several homes which were located next to large trees with root systems that had compromised plumbing systems.

Another important factor was the poor education and limited self-efficacy of the local populations. Many foreign objects, such as shoes, car parts, sanitary items, phones and all manner of items, were found

in septic tanks, distribution boxes, I/O's and drains. Trench systems had been, in many cases, crushed by cars driving over them.

Another issues, involved the hardness of the water, as most potable water in Central Australia and the Barkly region comprises of high calcium levels. Subsequent calcium deposits, quickly provides significant wear and tear to health hardware. So, overall, we found complete plumbing systems that needed replacement.

So, as discussed within this presentation so far, there are numerous constraints associated with financing infrastructure on Indigenous communities. I'll just remind you at this point that the Barkly region is 20% larger than Victoria; and before any contractor can step foot on a community, there is a \$2-\$6 per km fee per vehicle, and hourly fees for each contractor who attends onsite. Also, health hardware is constantly in a poor state of repair due to limited self-efficacy of local populations, which as discussed is constantly influenced by a lack of access to the social determinants of health.

Also, due to the high costs and constant need to replace eroding assets, the Barkly Regional Council Plan and Budget for 2015/2016 forecasts a deficit position of \$2.9 million. You might be able to appreciate, with those expanses of land and conditions found on remote communities, that this deficit reflects the difference between operating revenue and expenses. Therefore, there is no funding in Council to undertake all of the consulting and structural works provided through this project. However, there is a plethora of grant opportunities, which are provided to support initiatives such as discussed for the Alpururulam waste management.

For these reasons, Environmental Health reporting was required to be detailed; not just in a regulatory capacity but also in a capacity that succinctly describes those conditions associated with public health.

Ultimately, those audits undertaken by the plumber and subsequent Environmental Health reporting supported the Barkly Regional Council Grants Manager in their application for access to \$2 million.

The outcome of the working group also allowed a To Do, which highlights: what has occurred; and what still needs to occur.

After the identification of the waste management issues, a 47-page report was written, in the context of Housing for Health and in line with legislative requirements, describing the endemic nature of all plumbing issues found. The report coincided with a large swag of quotes provided throughout the entire Utopia region that identified that \$2 million would be needed to address the items that were identified.

The report was provided by Environmental Health to the Barkly Regional Council's Director of Infrastructure, Director of Housing, Operations Manager, and Grants Manager. The report was also sent by the Urapuntja Service Coordinator to the Director of the Office for Homelands, Outstations and Town Camps from the Department of Local Government and Communities, and the Minister for Local Government and Community Services.

Over a series of meetings, the working group reached agreements with the Barkly Regional Council to fund the \$2 million required to address the plumbing issues. Again, as there was no allocated funding in the Barkly Regional Council's funding, all costings must occur through those grant arrangements available for Indigenous communities.

In the meantime, the plumbers would continue to provide basic maintenance works on a priority basis until the funding was sourced. So most of the funding required addressed those plumbing issues provided within Environmental Health reporting. However, while some funding was dedicated to remediating the plumbing issues, it arose through functions outside of the working group.

Before being awarded any funding, for the project, the Barkly Regional Councils 'service contract' had expired; and this was subsequently awarded to a new service provider, operated by private contractors. Also, as the Barkly Regional Council was no longer the service provider, Urapuntja service delivery was subsequently discontinued.

However, as the Department of Local Government and Communities provides funding to the Utopia Homelands on behalf of the NT Government, their Director of Homelands, Outstations and Town Camps allocated up to \$1.2 million in funding (\$500,000 of which was additional prioritised funding) towards addressing those items provided within the Environmental Health and plumbing reports. Subsequently, ownership of the program was able to be handed over to the Office for Homelands, Outstations and Town Camps.

However, monitoring continues to be undertaken by Environmental Health through a consultative and regulatory capacity. This includes the application and notification process involved with altering or installing systems and through ongoing meetings, and an agreed reporting format developed specifically pertaining to the original Environmental Health report.

As such dedicated plumbers provided full-time plumbing works for over 9 weeks undertaking a fix and make safe program. Also, they continue to re-establish complete new plumbing systems. Importantly, the sustainability of the program is contributed to through ongoing prioritising of Municipal and Essential Services funding. Therefore, it is hoped that these mechanisms will contribute to sustainable plumbing programs.

Thank you. That is the end of this presentation. Are there any questions?

For more information

Aaron Clifford
Environmental Health Officer (Acting Coordinator)
Environmental Health Central Australia
PO Box 721, Alice Springs, NT 0870
Email: aaron.clifford@nt.gov.au

Glossary

HCAT Health Community Assessment Tool