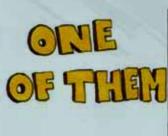
NUMBER 42



















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WARNING:

This magazine contains images of Indigenous and non-Indigenous people. Caution should be exercised while reading this magazine, as some of these images may be of deceased persons.

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MEWS

CAT helps shape the future at the Infrastructure Australia conference

🕇 n February 2012, Infrastructure Australia held the Connecting the Dots conference on infrastructure needs for remote Indigenous communities. CAT Chairman, Peter Renehan gave a keynote speech on power and renewable energy impacts in remote communities. The presentation highlighted the need to consider the energy infrastucture being introduced. Currently, prepaid metering (power cards) are how the majority of Indigenous households pay for power in remote communities. However, this brings with it demand-side management issues, as well as other factors like energy efficiency and understanding consumer behaviour, which need addressing. The impact on social behaviour is a key factor that often is not included in this type of assessment. While schools, shire officers and service providers have access to power on communities, Aboriginal people may feel constrained, operating with only a limited choice of power options. Compared to other energy users (such as service providers), Aboriginal residents take up only 40% of power usage on a remote community. The presentation recommended that if there is going to be any investment in remote Indigenous infrastructure, it needs to be based on need, valuing Indigenous culture, while building on the existing social capital within the community.



CAT chairman, Peter Renehan speaks at the Infrastructure Australia Connecting the Dots seminar.

Construction industry panel in motion

Vocational education requires a collaborative approach from all stakeholders. To enable this process, the Centre for Appropriate Technology (CAT) is establishing a number of Industry Panels to enable stakeholders to liaise regularly on matters relating to training. A working party of stakeholders from the construction and civil construction industries is currently meeting and looking to develop strategies around both the Government's Indigenous Employment Futures Initiatives and Regional Development Initiatives focusing on local employment opportunities.

Agencies involved with this panel include CAT, Chamber of Commerce, Civil Train, the Desert Peoples Centre, NT Department of Business and Employment, Resources Energy and Tourism Regional Development, Minerals Energy and Engineering Academy, Central Land Council and Ingekerreke.

The main role of this and other panels will be to identify employment opportunities, seek information about the requirements for the jobs available and then advise CAT on training strategies which will match learner's with available jobs.



Rainwater harvesting research project released

Water Quality Research Australia summer student, Chris Smithies, has just completed a 10 week project with the Centre for Appropriate Technology (CAT). Chris is an undergraduate student, in his final year of a double degree in Environmental Management / Business and Technology at Flinders University. During his time his time at CAT, Chris worked on a research project: 'Applications and methods for rainwater harvesting in the arid zone'.

The project documented the existing types of rainwater harvesting in arid Australia and explored its potential application throughout the region as an alternative form of water supply. This project found that rainwater harvesting has potential application as a supplementary water supply to increase water quality and security and for stormwater management and pastoral land rehabilitation.

Demand for this crop exceeds supply. Coles has been buying the Emery's bush tomato, mixing it with their sausage to produce their top-selling sausage product for the past six months.



A living science lab

For twenty years, Maxwell (Max) Keith and Ruth Emery have been living out on Pwerte Arntarntarenhe, working the land and developing soil quality, research and development processes allowing them to successfully grow an impressive crop of high-yield Kutjere (Bush Tomatoes).

Interview by HUJJAT NADARAJAH AND BEN WALL

riving past the sinewy sculpture like Rainbow Valley cliff faces, roaring along a windy dirt track following the freight train tracks, you eventually cross the fourth gated enclosure, with a sign on it advising that you are about to enter an Aboriginal owned scientific biological bush tomato research centre, and telling you to get out and spray your car wheels

with some type of disinfectant. When you look over the fence, you can see why — sprawling across a few acres of red dusty earth, is a field of green and purple flowered shrubs. It feels like you're catching a glimpse of fresh life in a teeming desert and if you look closely, you'll see each shrub is covered in tasty, ripe Kutjere, known as Bush tomato (Solanum Centrale). The field almost smells of money and raw organic strength and you just

want to run out, grab a bunch of tomatoes and sit there eating them all day. 'Taste these bush tomatoes,' says Max. 'I'll bet you'll never have tried a variety as juicy and sweet as these,' he proclaims. There is a twinkle of farmers pride in his eyes as he takes you around the farm and shows us how it all works.

Ruth Emery is sitting out on porch of the main tin house with a colander in hand, sifting through plucked Kutjere and taking out the



out bush

twigs and leaves. A Pertame and Southern Arrernte woman, Ruth's family has lived on this country, Pwerte Arntarntarenhe (John Holland North community region, NT), for generations. Thirty years ago, she married Maxwell Keith, an Aussie guy, hailing from Melbourne. This morning, Max has already been frantically running around the farm, pulling weeds from the earth, covering up bactivate drums, checking gauges, measuring data, and recording information, despite the midday sun burning down on all of us. He's one of those rare scientists who applies what he learns literally at the grassroots level, constantly experimenting, then analysing, reflecting and learning to advance quality and sustainability of his crop.

A good hour and a half hour's drive, John Holland North community is situated 120km South of Alice Springs, NT. When they first moved out, there was nothing on country, so the Emery family had to start a farm from scratch. Building an outstation to live in, getting a bore for water and turning about 1 hectare of clay like sand into enriched soil to make it suitable for growing Kutjere were some of the things they achieved during this process. Another aspect of farm set up, was finding a sustainable source of power to run the outstation — in this case, the Emery's worked with Centre for Appropriate Technology's Bushlight Project, to set up and install a Bushlight Community renewable energy solar PV system. 'I'm really happy with the bushlight

system, it runs all the time, and has given us a six fold increase in power, 'chuckles Max. While living here, the family raised and educated several children, who are now all grown up and working all over the country. These young people learned a variety of skills around infrastructure and agriculture. One of them is now a master builder, based in Broome. Another is assistant to the Alice Springs Court, and two of them are working with CAT at the Desert Peoples Centre.

Creating a space for the young to learn in

During the harvest season, Ruth's and Max's family comes in to pick up young people, to help hand pick the bush tomatoes. Throughout the years, many Indigenous youth,

5



GG

The potential opportunity to start up your own bush tucker farm is ripe for the taking.

hearing about the farm, have come out there to stay awhile, learning farming and agricultural techniques and gaining skills from the couple. 'Initially, when we'd run training courses here, some of the youths would come out here because they were curious and wanted to learn how to grow plants. I think working here and learning to grow bush tucker helped these young people realize that through field education, there are many options to grow crops which are can be profitable and rewarding,' says Max.

Initially, the family setup 'Pwerte Arntarntarenhe Aboriginal Corporation', and later setup its trading arm, 'Desert Garden Produce, forming a successful partnership with Tropigro NT, in the R&D of native foods and agricultural products. Desert Garden Produce, as a separately

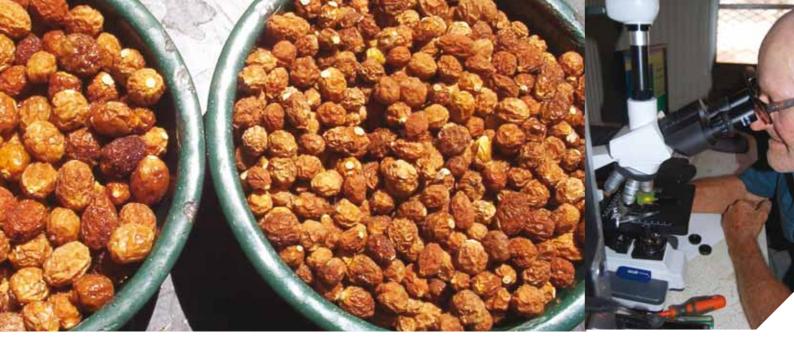
liable Indigenous owned business model, functioning as a tax deductible recipient charity, actually led the Australian Government in introducing a bill to enable this type of governance structure. The entity used this as a foundation to gain probono and in-kind support from a suite of corporate and research sponsors, including infrastructure, farm equipment and funding support to help upgrade their research facility and make their farm a viable enterprise. At one point, the Emery's even developed and discussed plans for a full scale agricultural vocational type school, but were unsuccessful in securing funding support for it.

Turning a sandy desert into a rich and fertile field

When you look at the fields of growing bush tomato out on the property, the surface looks quite scorched and hard. However, underneath this clay like surface level, is a rich composite of healthy soil. The Emery's have been pioneers in developing knowledge and research on how to produce the finest bush tomatoes from our arid soils. Max and Ruth were early and important contributers to the Desert Knowledge CRC Bush Tomato research project. More recently Max

has been working with scientists from the Nanjing University in China, trialling, giving feedback and ideas on an innovative agricultural product called Bactivate.

Bactivate are processed carbon based pellets (usually from coal dust), each of which contain thousands of dormant bacteria. These bacteria are exactly the same as are found in all normal healthy soils, though purified and concentrated. Bactivate becomes active a period once it has entered the soil. Its main functions are to suppress any virus that may be present in the soil and to improve the plants ability to access nutrients and minerals by unlocking the food particles, which may be encased in natural lime (alkaline). It also keeps the whole root structure clear of alkaline buildup. This product also improves water retention in the soil. Max remarked how 'we only have to water the plot two or three times during the season, so this saves us a lot in water consumption too.' Bactivate also reduces the need for high volumes of NPK (nitrogen potassium phosphorous) usage which greatly reduces cost. Once Kutjere seedlings are planted in the enriched soil supported only by organic fertilizers and trace elements, they grow much faster



and are able to produce a very much higher and more consistent yield over several months. The formula also reduces white fly, fruit fly and many other bugs from attacking the fruit and leaves of the plant.

Turning a plant product into a livelihood business

Increasingly, across Australia and overseas the demand for Kutjere has grown significantly. A number of fine dining gourmet restaurants have introduced bush food products into an Australian cuisine. Robins Foods (trading as Outback Spirits) created the Outback Spirit Indigenous Food Fund and this is now also supported by the Coles Indigenous Food Fund. This group contracted the Emerys a number of years ago because they wanted to source and support bush tucker producers from genuine Indigenous run farms. The result was a supply agreement between Robins Foods and the Emerys for the entire annual crop grown on the farm. Outback Spirit donated funds to assist in mechanical maintenance and helped set up a hothouse, where bush tomato seedlings could be grown and transplanted into the main garden. Further support also came in from Tropigro with fertilizers and science equipment, and Bactigro with products and scientific support.

Employment opportunities and future pathways

The feeling you get when meeting Max and Ruth is their drive, energy and commitment to long term action. Max and Ruth Emery's knowledge has led to major scientific breakthroughs in the suspension of natural living bacteria's that have never been seen before. This has impressed many in university research facilities across Australia, China, South Korea, Japan, USA and Saudi Arabia. A leading Ecosystems coordinator says, 'what the Emery's have achieved has put this field of science years ahead and by using their application methods, fields that were thought to be totally exhausted can now be made fully productive again, especially in dry arid zones'. 'Thousands of Chinese students pack out the Nanjing University lecture auditorium, to hear progress reports on our project in the Australian desert, and you can hear a pin drop, when my colleagues present their findings there,' says Max. There is an obvious eagerness to learn and further develop the science involved in producing high yield, sweet tasty bush tomatoes for high demand commercial markets.

Their Aboriginal corporation would like to see the infrastructure further developed, to build a structure that would house permanent team of Aboriginal staff, including pickers and a business manager to help grow the farm and attract further investment.

The potential opportunity to start up your own bush tucker farm is ripe for the taking. And what is surprising is the generosity of Ruth and Max and how willing they are to share their time and a huge wealth of ecological, agricultural and traditional knowledge. 'I've written and documented plans on how to grow all kinds of bush tomatoes, and how to set up your own small bush tucker farm business, and these are all here for other Aboriginal families to learn from,' says Max. 'We want to see other Aboriginal people learning how they can grow bush tucker on their homelands, and make a good business out of it,' says Ruth. Indeed, the potential opportunities for those Aboriginal families, living out on country, and looking to invest and grow Kutjere, looks and feels as tasty as the tomatoes out there in fields of Pwerte Arntarntarenhe. 'The harvest is waiting, all you have to do is go out and pick it,' says Ruth. □



The National Aboriginal Sporting Chance Academy (NASCA) spends time with Aboriginal youth empowering them through sporting programs.

By MICHELLE ENGELSMEN

he National Aboriginal
Sporting Chance
Academy (NASCA)
was founded in 1995
on the principal that
participating in sport
can have a positive impact on the
well-being of Aboriginal and Torres
Strait Islanders. Sixteen years later
we continue to hold true to that
founding principal, and have grown
to support so much more.

NASCA is an exciting and wholly Aboriginal governed notfor-profit organisation driving Aboriginal equality and cultural pride. We work in collaboration with community and Aboriginal young people to empower our youth through education, sport, and cultural programs. Our programs use both Aboriginal and non-Aboriginal role models across a range of sporting and other professions to support young people to build self-esteem, stay in school, and make positive life choices.

We run three main programs at NASCA. Firstly, for over five years our qualified teachers have delivered Academy programs in South Sydney and Central NSW by working within local schools to support education and personal development. Secondly, in 2010 we launched a new program, Careers and Aspirations Program (CAP), focused on strengthening young people's aspirations and developing career pathways. Through CAP we invite groups of students from schools around the country (most recently Barkly College, NT and Yirara College, NT) to attend camps at our home base in Redfern, Sydney, at the National Centre of

Indigenous Excellence. Our third program is our Athletes as Role Models tour (ARMtour) taking fantastic role models to remote communities in the central desert.

Three times per year, NASCA's ARMtour heads to the Central desert to spend a week engaging Aboriginal young people through education and sporting programs run in partnership with local schools. We largely use sport as a vehicle to engage with young people to choose healthy lifestyles, but we also work within the classrooms to support enthusiasm for learning, and motivation to attend school. Our volunteer role models also play sport and run arts and crafts activities after school.

The program has a long history of success and engagement, having been delivered since 1997. In that



time ARMtour has visited a number of communities throughout the Northern Territory and Queensland, with NASCA currently visiting Papunya, Yuelamu, Hermannsburg and Santa Teresa three times each year. This consistency of engagement has lead to strong NASCA/community relationships, and enhances the program's impact.

The data showing the impact of ARMtour speaks for itself. Each school we work with provide numbers showing attendance rates before, during and after ARMtour program delivery. The numbers show that during program delivery, the school experiences (on average) a 34% increase in student attendance when compared with before the tour, and that attendance stays up by 19% (compared with before the tour) for the month post tour. This exciting result means that more students attend school during and after NASCA's ARMtour program, ensuring they have the opportunity to learn the important lessons taught in the classroom. Most importantly, the positive results the program brings are being felt by the greater community. In the words of an elder and teacher in Papunya when asked her thoughts on the success of ARMtour 'It works, it brings the kids to school'.

To support the students in between ARMtour visits, NASCA has developed an online communication platform in the form of a facilitated and closed 'Facebook' style program. This program provides students with the opportunity to stay in touch with their role models from a distance, and for those important messages from our role models including healthy living and attending school to be reinforced.

NASCA's most recent ARMtour in October 2011 was a great success. An amazing team of role models including Olympians, touch and footy players, soccer players, swimmers, cyclists, triathletes, educators and youth workers, coupled with fun and educational activities targeting and supporting the needs of the individual schools and communities, resulted an incredibly high level of community engagement. More than ever, this tour highlighted to NASCA the high level of respect and trust the communities invest in the ARMtour program and NASCA's role models.

ARMtour delivered the first ever combined Hermannsburg and Santa Teresa Swimming Carnival in Alice Springs supported by the Northern Territory Government, Swimming Australia, and the YMCA. It was great fun, with over 150 students building self-confidence in water skills, and swimming ability. Even those students who were less strong in their swimming ability, felt safe knowing their NASCA role models would help them. With a call of 'Catch me!' and a courageous leap, they dove head first into the pool confidently. The Principals from each school have already requested that the carnival become an annual event, and are working hard to ensure their students have opportunities to work with Swimming Australia's Peter Tonkin between events.

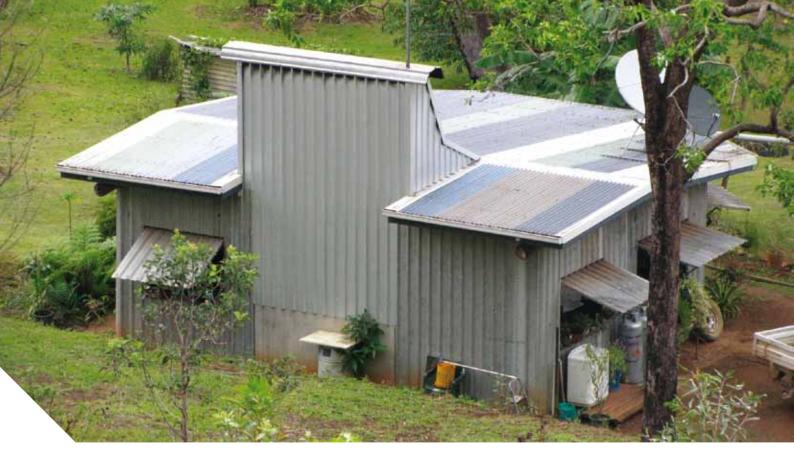
In Yuelamu, the role models got out and got active with young people in community, playing AFL and basketball after school. It was roasting hot under the October sun, but that wasn't enough to deter everyone from playing sport, and the games continued well into the evening. The whole community attended a relaxed, healthy and sociable BBQ event, catered for by ARMtour. BBQs of these kind help to support growth of already strong relationships between NASCA and the community.

In Papunya role models were taken goanna hunting and embraced as members of the larger community family. This trip was particularly special for both role models and community members, as one of our role model's uncles, Adrian Sleigh, had worked and lived in Papunya thirty years ago. He continued to be remembered and held in high regard and sharing stories of past and present provided a lot of peace, laughter and bonding.

As relationships between our NASCA and the communities we work with continue to strengthen and deepen, we all turn our heads towards a bright future. We are currently planning NASCA's next ARMtour in which is in April, and we can't wait to get back out to the central desert!



PHOTOS BY WAYNE QUILLIAM



Housing approaches in small Indigenous communities

By SONJA PETER AND METTA YOUNG

The context

Housing shortage and household overcrowding occurs in communities across remote Indigenous Australia. Whilst current investments, through the Strategic Indigenous Housing and Infrastructure Program in the Northern Territory (SIHIP) and the National Partnership on Remote Indigenous Housing are significant, new housing construction is, at this stage, limited to larger communities (population >1000) or 'town camps' around regional service towns such as Alice Springs. The backlog of need presents huge challenges for current and future investment, especially in the light of the rate of Aboriginal and Torres Strait Islander population growth and the burgeoning trend of out migration from remote areas (Taylor 2006).

The future pattern of settlement, that is the physical living conditions and residential arrangements for Aboriginal and Torres Strait Islander peoples across remote Australia, is continuing to emerge. It is currently being shaped by policies and programs that are driving the transformation of larger remote settlements into rural townships and providing limited investment in smaller communities. It is also being shaped by Aboriginal peoples on going aspirations for retaining connections to land and culture and realising their futures through capitalising on these assets, usually on homelands and outstations. These dynamics are not new.

The history

Housing was a strong vehicle for assimilation policies from the

1940s through to the 1960s, as was education and was very much focused on centralised mission or government settlements across remote areas. From the early 1970s as self determination and self management policies came to the fore and some groups had their Land Rights recognised, Aboriginal people began moving away from larger settlements and back to their traditional country or homelands. Then, as now, the logistics and costs of providing housing and other services to small and very remote family settlements was highlighted, but through the 1980s services largely followed people. In 1996 the Aboriginal and Torres Strait Islander Commission (ATSIC) instituted a moratorium (a halt) on funding for new housing on homelands or outstations. Whilst some dollars



Makes you feel proud having done something completely

were still available (such as though the National Aboriginal Housing Strategy — NAHS), outstation and homeland residents, and their resource agencies, had to become quite innovative to further develop housing and infrastructure. Certainly, the CDEP scheme was leveraged to support infrastructure maintenance and development. However, utilising one's own skills, resources and ingenuity arguably became critical to staying on and developing assets on country. Where this wasn't possible, homelands and outstations were either abandoned or utilised spasmodically. However, there remain 947 small communities (population <100) across remote and very remote Australia, with a varying suite of infrastructure assets developed through both government and self funded investments, and home to some 35,000 people (ABS 2006).

What is happening now?

In 2011 CAT undertook a scoping project on self-build housing in small Indigenous settlements in the Kimberley, Cape York and central Australian regions. Self-build is a practical and multifaceted method of building a house by reducing construction costs through the use of free building labour and free or inexpensive materials. Self-build involves the 'owner builder' in the planning design and management of the build as well as the actual construction process.

Twenty four Aboriginal or Torres Strait Islander people who identified as self-builders, from 16 different communities were interviewed. In addition, six organisations in WA and QLD that were running programs involving Aboriginal people in the construction of housing were also interviewed. We were interested

in understanding what people were doing for themselves on their outstations and homelands.

What we found

Secure land tenure, as traditional owners, or with permission from traditional owners (even where this was yet to be fully legalized or documented) was the critical precursor for accumulating materials or accepting offers of labour or professional assistance for constructing shelter and other infrastructure.

The nature of what was built or envisioned was influenced by economic opportunity. Housing was important but equally important was the type of livelihood that could be pursued by living on the land. We encountered self-builders running successful tourism business, marine research facilities, market garden ventures under development and plans for a healing centre on country. A number were also fully employed in towns proximal to their outstation or homeland.

The process of self-building required persistence, skills development and the ability to leverage assistance from family, peers and broader networks in accessing materials and construction. It was also a long term staged process and commitment, driven by circumstance and opportunity. Temporary dwellings evolved into more permanent structures that were being finessed and improved continually as materials, skills sets and resources became available. Some of the buildings had been a work in progress since 1970.

The buildings and spaces created on country reflected the individuality and aspirations of the builders themselves. A sense of security for

themselves and their families was an all encompassing motivation. Leaving a legacy for children and grandchildren was also important.

The buildings had some minor structural and or detailing issues. This reflected the fact that the actual building was shaped by the range of skills and knowledge of the builders themselves, or those they could access. It is unlikely that many of the dwellings self-built align with the standards set down in the Building Code of Australia (BCA). Indeed, the application of the BCA to small remote settlement infrastructure is an unresolved and potentially contentious issue. Building safety and durability is a key issue and the application of risk assessment approaches enabling step wise improvements towards safer, healthier and more sustainable buildings would be timely.

A key recommendation from the project was the development of a self-building resource network to support better and safer building processes. The network would need to be built on a framework of robust risk assessment and improvement strategies and enable a forum for skills development and knowledge sharing. □

The full report on the project Self-build: alternative housing procurement in remote Indigenous communities by Sonja Peter and Javier Ayora is available at

www.icat.org.au

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dealing with bullying

Bullying is a serious problem that children can experience during their school years. Whether they're being bullied or the instigator of bullying behaviour, the issue has wider social causes and implications. Figures released by the Australian Bureau of Statistics (2010) suggest that 11% of Indigenous children in Australia, or about one in ten, experience bullying at school.

From an edited Our Place Radio transcript with Julie Coffin and Phil Tucak

Juli Coffin is an Associate Professor in Aboriginal Health with the Combined Universities for Rural Health based in Geraldton Western Australia, Juli has been studying bullying amongst Aboriginal youth for many years. 'I think there are many reasons why one child or a group of children will bully, and it's probably not that different even in an adult context. The main reasons people bully are power, prestige, recognition and sometimes they bully for attention or just for a bit of a thrill', she says. She believes the main reason kids bully is power. 'What kids tell us is that they would rather bully and be up top than be someone who is bullied because that's far worse' she shares.

Juli Coffin's interest in this

area stemmed from her work and her own family's experience in dealing with bullying. She was a teacher years before going into health and research and her family has been affected by four suicides. 'I've seen what my family has gone through and what's left behind. And I reflected how these young people that suicided seemed very well-adjusted, they had very good homes, good opportunities, and yet chose death over life. So I thought to myself we're doing something really wrong if the young people are making that choice,' she shares. Juli wanted to be involved in getting a community message out there about what is happening and how we can all help. She states 'Whether you're a Nanna, or a neighbour or a teacher, we all have to keep these

young people in our safety net until they're old enough to stand alone. So it has been great to be able to help and engage schools and communities in this type of program or education stuff that's happening out of it, and hopefully with that awareness we can change things. That cycle like I mention, is very hard to change, so this is the beginning of that I hope,' she says.

Implications of bullying on wider society

Bullying can have far wider implications in society than just the physical or verbal abuse. In fact it is 'one of the causal pathways or elements that can affect somebody in their lifetime', says Juli. 'We're all different and we all have different tolerance levels and ways of looking



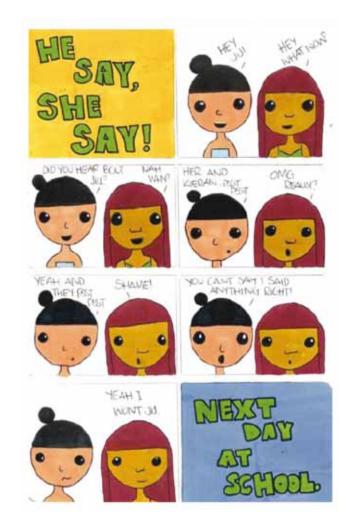
The main reason kids bully is power, and what kids tell us is that they would rather bully and be on top than be someone who is bullied because that's far worse.

at things; some people are described as really happy go lucky, other teachers or parents might say their kids are pretty quiet or outgoing — it depends on your personality type ultimately. Kids that might not have a good tolerance level may have been bullied a lot — it can affect them very deeply, and sometimes we don't see these effects for a few years', she says. For example, 'a lot of kids who end up in juvenile detention could be kids that have been bullied in one way or another and they go and do things, and then misdemeanours starts off. These become more serious but are purely for attention and for recognition. This is because in some areas and in some populations, the more serious the crime is, the higher status you get and the more feared you would be,' she observes.

A result of bullying is that kids can end up in these retribution cycles and re-offending is one of the major cycles within this system. There are many others too, 'it can be as basic as not turning up to school, resulting in high truancy rates which leads to kids not achieving, and then low self esteem at school,' says Juli.

Educating the public about bullying in an Aboriginal context

According to Juli, many of the Indigenous adults and elders they talk to in their research were bullied as children. 'They tell me we were bullied when they were young, and now they're in violent relationships', says Juli. 'For them, that's quite normal, because in their lifetime they may have had an unequal [or violent] relationship with a parent, step-parent or care-giver. That's how these cycles start off, which are very hard to break. You've got children and youth that are being parented without specific types of boundaries in place, and the result is an environment that's not real, it's not reality, and it is very unfortunate,' she shares.





To address the issue of bullying in an Indigenous context, Juli was privileged to be part of 'the solid kids solid schools' project. The website www.SolidKids.net.au was created to share information for teachers, parents and kids about bullying. It hosts content that educates children, youth and the wider community about the types of bullying that exist. 'We found a lot of Aboriginal kids, unless it was physical, didn't see it as bullying excluding someone, or really rubbishing someone, name calling, yarn calling — they thought that these were minor issues,' says Juli.

Five years after the site launch, Juli and her colleagues wanted to give something back to the community. This led to producing a DVD as a resource that can be used in schools to get people talking about the issue. 'Because we know a lot of kids don't talk about these issues and for many kids when we interviewed them about this stuff, it was actually the first time they'd spoken about it and that's quite distressing. Imagine someone has these continued incidents. This builds up, and explains why they wouldn't want to come to school or go out their front door,' she says. The DVD details the seven most common scenarios that kids. adults and elders talked about such as: family issues spilling into school, a young boy struggling with depression at school and what

he does to resolve it, and another scenario about peer pressure.

Cyber and Text bullying

The website and DVD resource also cover cyber and phone bullying, another emerging trend amongst young people living in urban and remote Indigenous communities. 'We've covered things like texting which is obviously huge nowadays, and Facebook, and cyber-bullying; these are very wide spread amongst all our kids', she says. She observes, 'In Aboriginal communities, most kids have got a phone and access to technology nowadays and it's spreading a lot quicker even to the remote communities, where we probably wouldn't have expected to





Words hurt.

They might not hurt us but they could hurt others, and none of it is okay.



see it as high'. In terms of outreach, the DVD resource and matching curriculum / lesson plan has been shown in Cairns and a few other national conferences and has been well received.

In terms of outcomes on the ground, Juli says, 'we are researchers, so it's hard for us to measure in the short term. I had a little community feedback sheet after the DVD resource was viewed in Geraldton and it was really positive. Parents, kids and community members in attendance said, "Yes it's great — it needs to happen — we need it in schools".

Juli also shared the story of a person who spoke to her a week later about a young girl who had watched the DVD. After seeing it she spoke to her parents about the bullying she was experiencing at school. 'The feedback has been very positive,' Julie concludes.

Is awareness of the issue changing behaviour?

'As far as changes in school and kids, we do know that when you raise awareness of these things, kids start to think that their actions have a reaction and that there's a consequence,' says Juli. 'Behaviours like cyber-bullying particularly, are a punishable offence and it's against the law to be doing these things on Facebook or inciting riots with your mobile phone. We've had some positive feedback from the police. Some of the fights have been video recorded and posted onto Diva Chat and Facebook and some of these people have been prosecuted, because those sites are public space. so there's nothing to stop anyone going in and having a look. People are being recognised, and if they've instigated or assaulted somebody, arrests have been made', she says.

Another issue is the severe consequences that can stem from bullying. Many people have been touched by youth suicide 'In our Aboriginal communities, our young men are at the highest risk, closely followed by our young girls and these types of things, like this bullying, maybe this cultural stuff that's happening, is not the way that we and our elders want our kids brought up', she says. 'One thing that I do say to a lot of young people is that, words hurt and we don't know how they hurt others ... they might not hurt us but they could hurt others, and that none of it is okay. Our grandparents would have said to us treat others how you want to be treated. I think unfortunately not many of our young people are thinking like that, so yeah, it would be good to pass this wisdom on to the next generation,' she concludes. \Box

Bench seat production at CAT

By NICK RAYMOND

n 2011 the five Outdoor Learning Areas constructed across the campus of the Desert Peoples Centre (DPC) in Alice Springs were completed.

In order to furnish these new spaces DPC management contracted the Centre for Appropriate Technology (CAT) to design and construct suitable seating. This request coincided with the commencement of new training being trialed by CAT's Technical Skills Group. The challenge of designing and fabricating bench seating was enthusiastically taken up by learners, and training staff.

From the beginning the materials had been identified; steel frames with recycled plastic slats. However a suitable design was still needed. Over a period of a week, through a process of internet research and experimentation with different angles and heights, the group finally agreed upon a design.

With the design in hand, the next step was to build a prototype. A week later the first bench was completed. This was to provide the template for the next 20 benches to be built.

The fabrication of the bench seats consisted of a range of tasks that were divided among the work crew. These tasks included: cutting lengths of steel to the correct length and angle, welding frames together, grinding welds and edges, drilling flat steel and plastic slats in preparation for bolting, stripping and sanding back of steel frames, and assembling benches.

In order to establish some kind of work flow the team quickly settled into specific roles. The clear advantage of establishing a systemic method for completing tasks was the efficiencies in time that were gained. This method also allowed individuals to develop proficiency in their allocated task through

repetition. The obvious disadvantage of using this method was the risk of boredom. Thankfully, all involved seemed accepting of some level of repetition and went about their work contentedly.

When the finished products began to be assembled, there was a degree of surprise at the professional standard that had been achieved. No doubt there was also a degree of pride felt by the learners who had been largely responsible for the fabrication and assembling of the benches.

It was not just the learners who were impressed by what they had made. It wasn't long before other staff around the campus noticed the benches and began making enquiries about ordering more benches for other sites around the DPC. There is now an intention to order materials to fabricate another 10 benches to meet demand.

The benches made as result of this project were a great success. However, the real value of this project was the experience gained by the participants. If 'learning through doing' is the key to successful training, this objective was thoroughly met through the bench making project. The learners involved with this project gained some insight into what it might be like to be employed in a workshop in the business of metal fabrication. They also gained experience in working as part of a team with real production goals and expectations of quality. Hopefully this experience will help to equip these men to





The Hudson Awardee CAT Projects Bushlight India Project

CAT Projects, a subsidiary company of the Centre for Appropriate Technology, recently won the William Hudson Engineering Excellence Award for 2011–2012, for its Bushlight India Project.

By MICHAEL TUCKWELL

n November 2011, CAT Projects had the honour of accepting the Sir William Hudson Award for its work with the Bushlight India Project. Presented at the National Engineering Excellence awards in Parliament House, Canberra, this is the highest project focussed award that Engineers Australia confers and in winning it, the project was being judged against over 50 other finalists including some of the largest infrastructure projects in Australia and some amazing innovations.

Funded by the Australian Government under the Asia Pacific Partnership on Clean

Development and Climate, the Bushlight India Project involved the collaborative development of the Bushlight India Model — an optimised model for remote village electrification, by a network of Indian community organisations and RE industry participants, including the Government of India, and CAT Projects. Based on the model developed and used by the successful Bushlight model here in Australia, CAT Projects then supported the demonstration of this model in a number of remote villages in India by our project partners, Gram Vikas, a grassroots NGO from the state of Orissa, Tata

BP Solar India, the West Bengal Renewable Energy Development Agency (WBREDA, a Government of West Bengal organisation), the World Wide Fund for Nature-India (WWF-India), and Greentech Knowledge Solutions, a private consultancy firm based in Delhi specialising in renewable and clean energy technologies and rural energy solutions.

The project's award by
Engineers Australia recognised the
model to be both innovative and
of widespread and international
application, yet for CAT Projects
and its Board, one of the greatest
outcomes from receiving this award,



which is of immense value and pride, was seeing work that was initiated in remote Aboriginal communities in northern Australia exported overseas to other developing communities, and publicly acknowledged as best practice. It also provides important recognition for the many Aboriginal people and organisations associated with the Bushlight project as well as the Indian NGO's and partners who worked to deliver the Bushlight India project.

The Bushlight India project was initiated in 2006 by the board of CAT Inc in order to share experiences from the Bushlight project within the international Access to Energy sphere, with the hope that doing so would contribute to efforts in addressing the lack of reliable, affordable

energy currently effecting over 1.4 billion — mainly rural — people worldwide. In India alone, tens of thousands of villages are both without access to electricity and too remote for grid electricity to be considered a technically or economically feasible option. For those villages where needs and expectation regarding energy supply go beyond what can be provided by solar lanterns and the like, the only solution are standalone (distributed generation) power systems. In this context, renewable energy technologies offer remote communities the opportunity to generate their own energy without the prohibitive ongoing costs and access difficulties associated with fossil fuels. For such systems to be sustainable and effective in supporting local development,

however, communities need to be active partners in the planning process and the supply of energy that is reliable, affordable and of appropriate capacity.

The project was able to value add to existing rural electrification work in India and South Asia by applying the lessons and experiences from Bushlight's work with remote Australian Indigenous communities, specifically by developing engagement processes and demand side management technologies which could facilitate much higher quality service delivery from community power systems than existing approaches. The Bushlight India Model was the successful outcome of this work, along with demonstration systems established in western Orissa and in the Sundarbans region of West Bengal.



These systems, which have been operating for close to a year and half, have brought dramatic changes for the people in these villages and the lives they live. In the village of Maligaon, people speak with pride of how beautiful their village now is and most summer nights families can be seen sitting outside under the streetlights sewing leaf plates for sale in the local market, or threshing crops, while children study inside under the bright light of 10W CFL lamps. They also say the lights have stopped the wandering herds of elephants that used to come and often destroy crops and houses. Meanwhile in the village of Rajat Jubili, the numerous shops connected to

the lives they live.

the system now stay open until late at night, including the local apothecary, while the local night market now attracts people from around the island.

These local impacts, and the reliability and quality of the power provided from the systems, are important not only for the people directly affected, but for the image of renewably powered village minigrids; and their potential as a viable supply solution for remote communities. In the larger scheme of things, the lessons and learnings from the project — combined with experiences from the Bushlight project in Australia — have also led to a much deeper understanding of the major structural barriers

to the large-scale deployment of village minigrids for remote village electrification in developing countries. These barriers exist at both the village level and at scale and are interlinked such that solutions which address the village level barriers can help resolve those at scale. With around 20% of the world's population lacking access to electricity (with the majority in rural Asia) implementation models are therefore needed that directly address these barriers and which are replicable, adaptable, and given the extent of energy poverty, able to be readily implemented at scale. Through the Bushlight India Project, the Bushlight India Model has proved to be one such model.

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