Travelling Together: Disability Inclusive Road Development in Papua New Guinea

Final Stakeholders’ Workshop
March 26, 2013
A/Prof Carolyn Whitzman, Urban Planning Program, University of Melbourne

Descriptor: A group of people with disabilities crossing a road in Madang (Photo: Disability Inclusive Road Development project)
What is the Disability Inclusive Road Development project?

AusAID funded participatory research project, from May 2010 - April 2013, addressing access by people with disabilities to road infrastructure and road planning processes in PNG

Data collector with problem bridge footpath in Lae (Photo: Disability Inclusive Road Development project)
Research Aims

1. Prioritize appropriate responses to access needs of people with disability in PNG

2. Contribute to the evidence base for disability inclusive infrastructure development in the Asia-Pacific region

3. Develop guidelines to support disability inclusive infrastructure consultation, planning and development for use by various stakeholders involved in road decision-making and construction

4. Develop a training package on disability inclusive road planning and development, to be conducted by disability organisations for infrastructure stakeholders

5. People with disabilities (women and men) have ownership of the research and the capacity to utilise the findings in their advocacy and rights-based work with the PNG government and development sector
1. What are the barriers and facilitators for people with disabilities accessing roads in rural and urban PNG?

2. What are the outcomes of rural and urban road projects on the lives of people with disabilities and their families?

3. How have people with disabilities participated in rural and urban road planning?

4. What are the recommended approaches in disability inclusive consultation and participation in road planning and development in PNG?
Project Principles

Project principles:

- Full participation of people with disabilities in every phase
- Accessibility
- Capacity development
- Inclusion of all groups
- Partnership building

Descriptor: People with disabilities congratulate each other at the close of a group discussion with clapping in sign language. (Photo: Disability Inclusive Road Development Project)
Project Partners

- CBM-Nossal Institute Partnership for Disability Inclusive Development
- Faculty of Architecture, Building and Planning, University of Melbourne
- Cardno Emerging Markets
- PNG Assembly of Disabled Persons
- Other people with disabilities and organisations
- Divine Word University
- Funded through Australian Development Research Awards (ADRA) program by AusAID – Australian Agency for International Development

Descriptor: Buluminsky Highway New Ireland - a section of the highway which is currently under maintenance. There are eight road workers and a truck. They are fixing potholes and widening the road itself. (Photo: Disability Inclusive Road Development project)
What we did

Start of project May 2010

1. Literature review August 2010
PNG partnerships developed (Sept 2010 field trip)
Research protocol and ethics developed – final site selection (Oct 2010-April 2011)
Hired PNG research officer (Ipul Powaseu) and data collectors (Oct 2010-April 2011)

2. Trained data collectors and piloted in Madang (June 2011)
Data collection (Sept-Dec 2011)
Data Analysis workshop and presentation of findings to road decision makers (Feb 2012)

3. Advocacy workshops with PNGADP and road decision makers (September 2012)
Ongoing local advocacy (Sept 12-March 13)
Creation and launch of guidelines (March 2013)

Descriptor: Data collectors ,Elisabeth Kasuem and Benedict Hipom, practicing using the “Moveabout tool”. Elisabeth is standing with her crutch and Benedict is sitting in his wheelchair. Elisabeth is taking notes. (Photo: Disability Inclusive Road Development Project)
What do we already know about roads and people with disabilities in PNG and other developing countries?

Descriptor: Part of a photo collage created with Madang during training (Photo: Disability Inclusive Road Development project)
Roads: Necessary but Dangerous

Road development can reduce poverty in developing countries by improving:

- Access to essential services like schools & healthcare,
- Social networks
- Economic opportunities

(Barrios 2008; Estache 2010)

Descriptor: Children using a road to get to school in Lae
(Photo: Disability Inclusive Road Development project)
Road traffic is projected to become the third largest global cause of death and disability by 2020, with road crashes disabling 20-50 million persons per year, mostly in low income countries (Murray and Lopez, 1996; WHO, 2004).

Impacts of poor access to roads for people with disability include high unemployment and lack of access to health and social services (Fouracre et al, 2006).
Primary means of road transportation in PNG is walking (World Bank 2008)
Approx. 35% of the population live over 10 km from a major road and 17% have no road access at all
Up to 85% of major roads are impassable during the wet seasons (World Bank 2010)

World Bank Socioeconomic Survey (2007) found that for villages near road or bridge improvement projects:
Increased income in 50% of provinces
Reduced travel time to schools and health clinics; reduced school drop-out rates
Road Deaths in PNG

<table>
<thead>
<tr>
<th></th>
<th>PNG</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road fatalities/100,000 Inhabitants</td>
<td>14.2</td>
<td>5.71</td>
</tr>
<tr>
<td>Road fatalities/100,000 vehicles</td>
<td>1,092.3</td>
<td>8</td>
</tr>
<tr>
<td>Number of fatalities</td>
<td>~1,000</td>
<td>1,291</td>
</tr>
</tbody>
</table>

- PNG has high road fatality rates, and they will only get higher as roads and number of cars expands – UNLESS safety standards are implemented.

Road infrastructure planning is mostly led by governments – But community participation can improve results (Paul & Katare 2010)

- India: village councils prioritized roads for improvement, community members led walkabouts with engineers to prioritize improvements (Paul & Katare 2010)

- Tanzania and Uganda: group discussions with councils, engineers and community representatives to prioritize roads for improvements (Leyland 2003)

Descriptor: A poster from a community activity highlighting things they like about a road. (Photo: Disability Inclusive Road Development project)
Why consult with people with disabilities?

• UN Convention on Rights of Persons with Disabilities (CRPD)
• People with disabilities can have additional access needs to other road users
• Accessible roads are accessible for everyone! Children, older people, pregnant women ...
• Cheaper to plan it in than to fix later!
• Malaysia: local authorities require architects and builders to adhere to the Malaysian Standard Codes of Practice for building plans to be approved. After a building is constructed, an access audit includes people with disabilities suggesting improvements.

• Gujarat India: an access resource group consisting of architects, builders, designers, engineers, people with disabilities, and development and rehabilitation professionals carried out trainings, audits, and public education events (WHO/World Bank, 2011, pp. 176-177).
Disability Inclusive guidelines/ processes

- Transport guidelines for developing countries include the importance of advocacy and consultation with people with disabilities, including involvement in access audits and photographing problem sites (Venter et al 2004), but public transport (rail) focus, little on pedestrian safety and no participatory tools.

Photo: Julie Babinard, blogs.World Bank.com
Stage Two: undertaking the research

- **Interviews** with local road decision-makers
- **Group discussions** with people with disabilities
- "**Moveabouts**"
- **Photo elicitation and poster making**
- **All materials in Plain English**

Descriptor: Data collectors and participants from the pilot of the group discussion and poster making tool. There are women and men with different types of impairments, children with disabilities and their parents. (Photo: Disability Inclusive Road Development Project)
How are people with disabilities involved in the research?

Five pairs of data collectors:

Descriptor: This is a photo of the data collection team! From left to right at the back there is: Mary Ikupu, Joyce Christian, Ismael Leanave, Joseph Lapangot, Hekoi Igo, Elina Seko, Demond Beng and Babra Peter. In front is Ipul Powaseu, PNG Research Officer, Rachel Tararia seated, and Benedict Hipom, seated. (Photo: Disability Inclusive Road Development project)
Research protocol: sites

Stretches of roads in five sites:

- 2 urban sites (Port Moresby & Goroka)
- 3 rural sites (Lae, Madang & New Ireland)

Combination of roads which are completed and those under re-development or maintenance

Descriptor: Consultations with different stakeholders on site selection. There are a group of people looking at a map of PNG. These people represent PNG Assembly of Disabled Persons, the National Board of Disabled Persons, and the National Disability Advocacy and Resource Centre. (Photo: Disability Inclusive Road Development project)
## Data collection sites

<table>
<thead>
<tr>
<th>Road</th>
<th>How many? Who?</th>
<th>Impairments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Moresby</td>
<td>Boe Vagi in Hanuabada. It was completed within last 2 years. It is currently being rehabilitated (repaired).</td>
<td>10 people: 6 women, 4 men. Between age 10 and 56, mostly between 18-30. 2 speech and hearing, 1 speech, 4 intellectual impairment, 2 wheelchair users, 1 partially sighted.</td>
</tr>
<tr>
<td>Madang</td>
<td>Talidig Market to Talidig school stretch of Madang- Bogia National Highway, in rural part of Madang province. It was completed 12 years ago</td>
<td>8 people for most activities: 5 women, 3 men, all under 30 2 wheelchair users, 2 users of crutches, 1 vision impairment plus balance, hearing impairment</td>
</tr>
<tr>
<td>Lae</td>
<td>Zifasing stretch of Okuk Highway (Highlands Highway). The road was resealed over the last 3 years</td>
<td>7 people: 2 elderly( 1 man, 1 woman ), 1 teenaged boy, 4 girl children aged 6-8 with parents 2 amputees, 1 hearing impairment, 4 movement impairment</td>
</tr>
<tr>
<td>Kavieng</td>
<td>Buluminsky Highway between Kavieng and Lemakot in New Ireland. Road was created 18 years ago but there is routine maintenance going on, including resealing, bridge upgrading and drainage construction</td>
<td>11 people: 8 youths (under 25) and 3 adults; 6 women, 5 men Visual, intellectual, hearing impairments; no mobility impairment other than data collector.</td>
</tr>
<tr>
<td>Goroka</td>
<td>Highlands highway from Rotary Park to the National Sport Institute in town. There is a plan to upgrade and reseal the road by the end of 2012</td>
<td>12 people: 2 women, one 40 year old, others men, mostly students aged 20-30 Mostly mobility impairment, 1 speech/hearing impairment, multiple disability,</td>
</tr>
</tbody>
</table>
How have roads changed the lives of people with disabilities in good ways?

All groups agreed that roads have improved access to services

“We attend schools – travel by PMV and walking. Fetch water, look for firewood. Go to canteens and trade stores to buy food, soap, clothes and many other things. Go to Goroka Base Hospital and Loki health clinics to get medication and check on health issues like malaria, disability related illnesses and blood tests for HIV and AIDS. Visit friends and families in the village during the weekends and holidays, play in the Mt. Zion fields, go to church where there are many gatherings, do laundry at the nearby creek or Kamalinki river for a swim, go to the library at the University of Goroka. Our favourite place in this part of town is the National Sports Institute because sports activities are organized every weekend and town because there are many shops and interesting things to see. Most travel is walking.” (Goroka summary of group discussions)
All groups said their use of services was severely limited because of inaccessible roads

- Talidig group (Madang) indicated that they rarely go out. The road has brought more traffic and more people, making it more dangerous
- Some people in Zifasing (Lae) avoid road because of danger of being hit by passing vehicles. Others use the main road as the short cut has long grasses and it is narrow and difficult to use with a crutch
- Port Moresby participant: “I don’t travel because I need to borrow a wheelchair to go around, and this road is too narrow for a wheelchair.”
What helps people with disability access roads in PNG?

**Good maintenance** “In Goroka, there is a particular route leading to Sacred Heart Primary School that we like to take because there are fences built by Mt. Zion Centre for Disabled beside the road that help us to feel our way to where we like to go (as a blind person) ... Roads are maintained in the town because the youths within the urban area have done the cleaning.”
What helps people with disability access roads in PNG?

People keeping an eye out for one another

• “I usually cross the road near market or school or near places where there’s a lot of people so they can help me see the traffic.”
  (hearing impaired person in Lae)
What harms people with disability accessing roads in PNG?

**Roads planned for cars and trucks, not people**

- In all 5 sites, most participants indicate that they are forced to walk on road, because there is no footpath, or it is inadequate (too narrow, too many cracks, obstacles, markets on path)
What harms people with disability accessing roads in PNG?

**Roads planned for cars and trucks, not people**

- “Road is on a slope and hard to walk on, but there are no footpaths, loose gravel and rocks on the edge of the road, so impossible to do anything but go on the road.” (Madang)
What harms people with disability accessing roads in PNG?

Roads planned for cars and trucks, not people

- “It is hard to access the road because the cars are on high speed and the sides of the road are too high. There is no enough space for a wheelchair or pram and they can get knocked off by passing vehicles.” (Lae)

Lae resident pointing to the site of an accident (Photo: Disability Inclusive Road Development project)
Lack of marked crossings

- All groups agreed: school areas, markets and busy areas need crossings that have clear signs (e.g. “school 100 metres”)
- No signed crossings in the 3 rural sites, limited and inadequate crossings in the 2 urban sites
- “People cross road anywhere because there is no crossing – only two crossings at Hagara Primary and St. Michael schools but signs not maintained and cannot be seen.” (Port Moresby)
What harms people with disability accessing roads in PNG?

Narrow Bridges with limited pedestrian access

- Bridges with no footpaths, or lack of ramp and narrow width making it unsuitable for people with mobility impairment
- “The bridge has no rails and is not suitable for people.” (Kavieng)
What harms people with disability accessing roads in PNG?

**Road Drainage and Maintenance**

- All groups spoke of drainage issues, especially after rains – which leads to road damage
- Open drainage ditches hazard for visually impaired
- Loose gravel on road makes it tricky to walk near side of road (Madang)
- The unsealed road is bumpy and makes travelling very difficult as a paraplegic using wheelchair to move (Goroka)
- Trees have grown on footpaths, blocking the walkways (Port Moresby)
What harms people with disability accessing roads in PNG?

**No Bus Stops**
- All sites reported no proper bus stop areas, making it unsafe to wait.
- Difficult for people with mobility impairments to get onto buses, or for people with hearing impairments to know which unmarked bus to get on.
- “Bus stops don’t have shelters or benches or signs or ways to carry wheelchairs.” (Goroka)

**Lack of Public Awareness**
- “We need to raise public awareness on the use of roads, especially by people with disability, so that the general public and drivers will know that we are also using the road to travel.” (Goroka)
Stage Three: Advocacy and Guidelines

- Guidelines to support inclusive consultation for use by PNG government, AusAID, World Bank, consultants (e.g. Cardno)
- Training package for disabled people’s organizations to work with road decision-makers

Descriptor: Two children with disabilities holding their drawing of things they like about roads. There are figures of people, houses, cars and vans, a “thumbs up” and boats. (Photo: Disability Inclusive Road Development Project)
Successes so far...

- Building a partnership with PNGADP
- Training of 11 skilled data collectors and analysts
- Piloting and adapting tools – useful protocol
- Great support from disability service providers
- Positive media interest – on web now!
- Great involvement by road decision-makers
  February and September 2012

Descriptor: A young participant rests in the shade during the “Moveabout” pilot – He is giving a “thumbs up”. (Photo: Disability Inclusive Road Development Project)
Great Lessons!

• All Road Decision-Makers interviewed were interested in the project and wanted to know more
• All 48 participants with disabilities interviewed had lived in areas for most of their lives – free expertise!
• Participatory & inclusive processes are inexpensive: focus group discussions, moveabouts, using mobile phone cameras
• A dozen skilled data collectors have been trained
• Many recommended changes can be incorporated into road planning processes at minimal expense (footpaths, signs, bus stops) and others will certainly save money in the long run (drainage) – some can mobilize community (maintenance)
Resources on our website

• Literature Review (September 2010)
• Protocol (December 2010 – revised June 2012)
• Research Findings (May 2012)
• Presentations:
  – World Planning Schools conference July 2011
  – World Urban Forum Naples September 2012
  – Pacific Disability Forum April 2013
• AusAid Working Paper and briefing note
• Guidelines for Road Planners and Engineers/ for policy and decision-makers

• PNGADP: your resource for consultation with people with disabilities
• Cardno: your resource for technical advice on disability inclusive road development
• AusAID: guidelines intended to be used in conjunction with Accessibility Design Guide
Your tasks

• Use these guidelines – distribute them to all road policy-makers, planners, and engineers in your organization

• Report back to us on how they are working

• Use PNGADP and disabled people’s organizations as a resource for building safer and more accessible roads (and buildings)
Thank You!

- AusAID – Australian Agency for International Development – for funding the project
- Benson Tegia and Ipul Poweseu and all data collectors, PNGADP
- Dick Kell and Lois Knight, Cardno
- Natalie Stephens and Kathryn James, CBM-Cardno partnership