

RESEARCH TO PRACTICE:

ENGAGING LOCAL COMMUNITIES IN THE FUTURE OF TRANSPORTATION



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> WHO ARE WE?



Tony Greening

Independent Transport
Research Expert



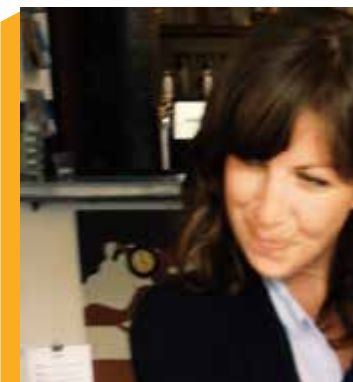
Gina Porter

Senior Research Fellow,
Durham University



Caroline Barber

Head of Programmes,
Transaid



Helen Morgan

Editorial Associate,
Devex

> AGENDA

- **Introduction**
 - Helen Morgan, Editorial Associate, Devex
- **Current State of Rural Road and Transport Research**
 - Tony Greening, Independent Transport Research Consultant
- **Active Action Research Methodology & The Importance of Community-Driven Development**
 - Gina Porter, Senior Research Fellow, Durham University
- **Implications of Community Participation in Rural Access Projects: The Practitioner Perspective**
 - Caroline Barber, Head of Programmes, Transaid
- **'The Road Ahead: Increased Inclusiveness in Road Projects' Moderated Discussion**
- **Audience Q&A**

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RESEARCH TO PRACTICE:

ENGAGING LOCAL COMMUNITIES IN THE FUTURE OF TRANSPORT RESEARCH



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CURRENT STATE OF RURAL ROAD AND TRANSPORT RESEARCH

TONY GREENING

INDEPENDENT TRANSPORT RESEARCH

EXPERT



> FACTS SHEET

- > 1.2 billion of the world's poor still lack access to an All Weather Road (AWR)
- > 40-60% of people in lower income countries live >8km from a health care facility
- > People in rural areas can walk 20km+ to an AWR
- > 3,000+ people die from road traffic injuries a day
- > 85% of deaths and 90% of injuries occur in low/middle income countries
- > Over 70% of roads in Africa remain unpaved
- > **Research is required to provide cost-effective solutions to these and similar problems in the transport sector that impact on rural communities**

> IMPEDED ACCESS



> IMPEDED ACCESS



> IMPEDED ACCESS



IMPEDED ACCESS



> RESEARCH IN LOWER INCOME COUNTRIES

> Local practitioners

- > Most knowledgeable about local problems
- > Best suited to find appropriate solutions

> Developing countries

- > Many independent for 50+ years yet still rely on expatriate inputs for research to find solutions to transport problems in rural communities

> CONSTRAINTS ON RESEARCH & RESEARCH KNOWLEDGE

- > Research seen as luxury by politicians
- > In the past, research reports were in hard copy and difficult to access, making updating them costly and infrequent
- > Designs and specifications for roads were based on traffic, materials and environment in developed countries
- > Roads are constructed to strict designs and specifications
- > Infrequent revision of design manuals constrained implementation of beneficial research outcomes

> RESEARCH AND INNOVATION

- Research is the mechanism for the advancement of knowledge and growth
- Research provides opportunities to test new ideas and to develop innovative solutions
- Countries that invested heavily in research have grown economically (i.e. relationship between research investment and growth)
- Developing countries investment in research (including the transport sector) is often zero

> EXAMPLES FROM THE EVALUATION OF BENEFITS RESEARCH PROJECTS IN THE TRANSPORT SECTOR

- > Annual benefits for 12 projects = 15 times the annual costs of all TRL projects (over 400) being undertaken in the base year. (*TRL Report 1995*)
- > Estimated R&D benefits in the UK: Every one million pounds invested in R&D benefits society by 20 million pounds annually. (*Bly 1996*)

> POTENTIAL IMPACTS OF LOCAL RESEARCH CENTRES

- > Advancement of knowledge
- > Development of new ideas/innovative solutions
- > Provide LOCAL solutions
- > Calibrating research-based evidence from elsewhere
- > Longer-term research projects
- > Sustainable research

> RESEARCH INTO PRACTICE

- > Resistance to change
 - > Political apathy
 - > Inappropriate focus on risk
 - > Resistance to new technologies
 - > Little incentive for change
- > Solutions
 - > Consultation with all stakeholders
 - > Ownership by stakeholders/involvement in planning
 - > Demonstration projects
 - > Consultant/contractor training

> DESIGN MANUALS

> CHANGE IN APPROACH TO RURAL ROADS

- > Road network as a national asset
- > Timely maintenance
- > Dedicated funds for maintenance
- > Life-cycle costing for rural roads
- > Lower traffic threshold for upgrading
- > Low-cost surfacing technology
- > Provision of sustainable transport services
- > **Increased acceptance of the need for developing local research capacity**

> RECENT IMPACTS

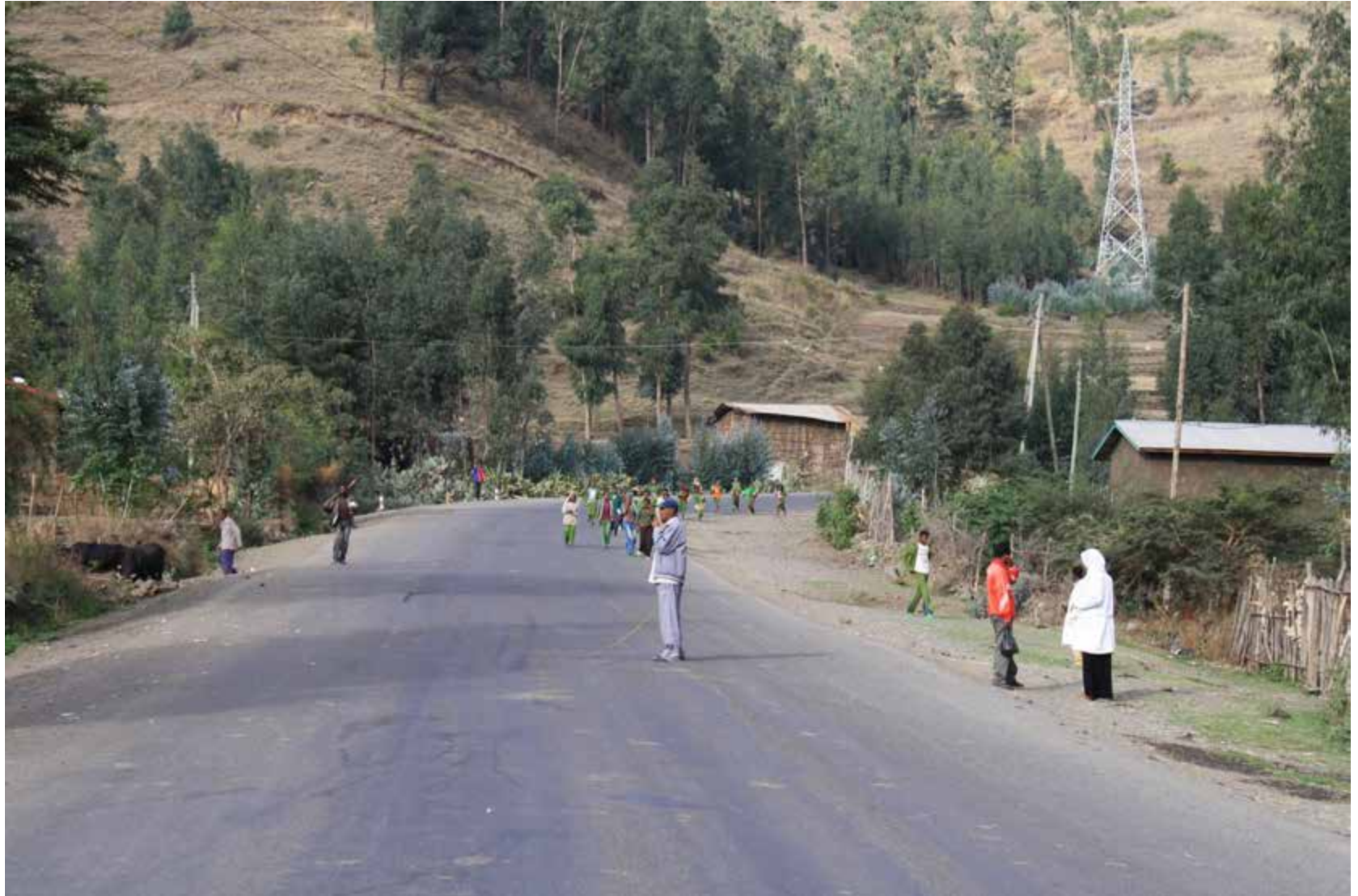
- > UK- Government funded projects such as SEACAP, AFCAP1 and ReCAP (AFCAP2 and ASCAP)
- > Research and demonstration projects
- > Design manuals and specifications
- > Trainings/workshops in research and best practices
- > Increased consultation with local practitioners and communities
- > Reports in electronic format and Internet access

> BOTSWANA TRANS-KALAHARI HIGHWAY



- > SAVINGS > US\$20 million
- > The materials used in the construction of this road could not have been used before new and acceptable specifications were developed through research

> THANK YOU



ACTIVE ACTION RESEARCH METHODOLOGY & THE IMPORTANCE OF COMMUNITY-DRIVEN DEVELOPMENT

GINA PORTER

DEPARTMENT OF ANTHROPOLOGY,
DURHAM UNIVERSITY, UK

> **FOCUS OF THIS DISCUSSION**

- > A series of research studies focused on understanding **transport services from a USER perspective in sub-Saharan Africa**
- > A particular emphasis **on the needs and experiences of commonly disadvantaged groups**, including those who may currently have little access to transport services [women, children, older/infirm people]
- > **Specific methods reviewed:**
 - > Participatory Action Research
 - > Mobile interviews
 - > Co-Investigation as a base for mixed-methods research: experience with children, young people and older people

> PARTICIPATORY ACTION RESEARCH: AN INTERMEDIATE MEANS OF TRANSPORT INTERVENTION IN COASTAL GHANA

- > 5-village study in off-road areas with Ghana's MoFA
- > Aim: to assess potential of IMT to improve women's market access + examine other impacts of intervention
- > Detailed 1year baseline data collection re transport needs
- > 6 different IMTs made available to villagers; IMTs selected for credit purchase - women prioritised
- > 20 months monitoring of 70 adopters + matched control group
- > Monitoring highlighted many complexities of intervention - child involvement, maintenance issues etc.



> PARTICIPATORY ACTION RESEARCH

- > **Key features:** intervention experiments which involve a team of researchers with research subjects as co-participants
- > **Strengths:** can reveal many important issues re differences between stated preferences [pre-intervention] and actual patterns of adoption
- > **Limitations:** time inputs required for adequate monitoring of intervention group; need to find willing, matchable control group for comparison

References

Porter, G. et al. 2012: Gendered patterns of IMT adoption and use: learning from Action Research. Research in Transport Economics 34

Raballand, G. et al. 2011 Are rural road investments alone sufficient to generate transport flows? Lessons from a randomized experiment in rural Malawi and policy implications. World Bank Working Paper Series - Policy Research Working Papers January 2011.

> MOBILE INTERVIEWS

- > Used mobile interviews regularly in 24-site child mobility study [Ghana, Malawi, South Africa]
- > Walking journeys from school, to water points, collecting firewood etc.
- > Children often shy talking face-to-face with adults
- > Neighbours, parents etc. tend to hover in stationery interviews – privacy difficult
- > No need for eye contact when walking; silences natural
- > Encourages informal conversation, unsolicited observation



> **MOBILE INTERVIEWS**

- **Key features:** interview respondents as accompany them on journeys [especially common in pedestrian contexts, but can be applied to motor travel]
- **Strengths:** a good way of establishing rapport with interviewees where interaction complicated by strongly skewed power relations; strong insights into journey constraints and benefits
- **Limitations:** time/cost, potential ethical issues e.g. mixed gender interviews suspect; older people sometimes limited walking capacity

References

Porter G, et al. Where dogs, ghosts and lions roam: learning from mobile ethnographies on the journey from school. Children's Geographies 2010; 8,2: 91-105.

> CO-INVESTIGATION AS A BASE FOR MIXED-METHODS RESEARCH

- > Used first in child mobility study - Ghana, Malawi, South Africa
[after pilots in India, Ghana, SA]
- > 70 'child' researchers, 11-19y school pupils, recruited
- > 1-week training workshop [2 workshops per country]
- > Children select methods, location, time-scale for mobility studies [mostly c. 3 weeks]
- > Findings feed into larger adult academic research study
[qualitative check-list interviews, N=1200; survey N=3000]



> CHILD RESEARCHERS BROUGHT THEIR OWN INSIGHT — DIFFERENT FROM ADULTS

> Rationale:

- > Lack of attention to children and young people's transport and mobility needs in Africa [excluding road safety]
- > Traditionally, children expected to be 'seen, not heard'
- > Children's and young people's complex mobility needs – for school, household and paid work, etc.

> Advantages:

- > Brings a clear view of children's perspectives [but ethical issues need careful consideration - not using children as cheap labour etc.]
- > Researchers not misled when children say what they think people want to hear
- > Pick up issues that children think adults will not understand/think too unimportant[e.g. car horns + biting dogs as a key walking hazard]

> EXTENDING THE CO-INVESTIGATION RESEARCH APPROACH IN OTHER CONTEXTS

- > Some of our 'child' researchers (trained 2006) have continued with us in the academic research teams of a phones/mobility study [same 24 research sites]
- > Applied same approach to AFCAP study of older people's mobility issues [re access to health, livelihoods]Tanzania , e.g. J. of Transport Geography 2013, v.30, 161-169.
- > Many other journal publications [e.g. *Qualitative Research* 2016, v.16 no. 3 293-304.+ book on children's daily mobility: Palgrave, in press]



> OLDER PEOPLE AS CO-RESEARCHERS IN TANZANIA AFCAP STUDY

- > Research study with HelpAge International
- > 12 Older people 60-70y recruited
- > Prior review of methods used with child researchers - allowed selection of potentially appropriate ones
- > Developed suitable age-adjusted qualitative methods with OP
- > Training by experienced HelpAge facilitator
- > 5 young RAs support facilitator
- > 1 week training, conducted in Swahili
- > Training in classroom followed by field trial for each method



> METHODS IN WHICH OP PEER RESEARCHERS WERE TRAINED

- > Techniques of interviewing
- > Visual mobility mapping techniques [simple flow maps to show distance to nearest clinic, market, water source etc.]
 - > Maps used to generate discussions about frequency, purpose, journey distance, mode of travel, cost, time etc.
- > Mobile interviews [not successful – substituted with OP peer researchers' 2-week travel diaries]
- > Seasonal calendars [re changes in accessibility and associated health/livelihood journeys] as a base for discussion
- > Timelines for daily journeys; weekly journeys as a base for discussion
- > Use of disposable cameras





> **CO-INVESTIGATION AS A BASE FOR MIXED-METHODS RESEARCH**

- > **Key features:** community members recruited as co-researchers to identify key questions for subsequent follow-up by academic investigators [with qualitative and quantitative research]
- > **Strengths:** unique community access, novel insights; helps redress power imbalances
- > **Limitations:** ethics; time/skill inputs for initial training; intensive support required throughout; managing expectations; needs care re interactions with other stakeholders

> CONCLUSION: BROADER LESSIONS

- > Major advantages of participatory approaches for mobilities research, especially with vulnerable groups: deeper participation, stronger project ownership, data quality, BUT
 - > Time + cost implications (for participants and researchers)
 - > Ethical concerns with vulnerable groups – needs a critical approach + regular monitoring
 - > Needs sophisticated, reflexive understandings of impacts of power, politics, culture, history
 - > Embedded practices of transport professionals may continue to exclude other voices
- > Outcomes are crucial:
 - > Will findings be overridden by vested interests?
 - > How will negative outcomes be dealt with?
 - > How do we deal with our own biases as researchers?

IMPLICATIONS OF COMMUNITY PARTICIPATION IN ROAD PROJECTS: THE PRACTITIONER PERSPECTIVE

CAROLINE BARBER

HEAD OF PROGRAMMES, TRANSAID

PREPARED WITH SUPPORT FROM VICTOR SIMFUKWE AND EDWARD O'CONNOR

> A COMMUNITY ENGAGEMENT APPROACH

> Some key considerations

- > Programmes that aim to improve access for people living in rural communities need to invest in understanding the issues on the ground
- > It is vital to understand the local context, this includes the current availability of transport services
- > The community are best placed to articulate their transport needs
- > Traditional leaders should also be consulted
- > Communities can offer advice and feedback on what needs to be strengthened, what transport is suitable for the terrain, can be maintained locally and is culturally appropriate
- > Without involvement of the community, programmes are likely to be unsuitable, unsustainable and there is a high risk of failure

> A CASE STUDY FROM ZAMBIA

- > Bridging the referral gap – implementing an Emergency Transport Scheme in Zambia



> BACKGROUND

- > Barriers to accessing health facilities
 - > In rural Zambia, transport availability is often:
 - > Expensive
 - > Limited in availability
 - > Terrain can be challenging
 - > Currently many women in labour walk, use make-shift stretchers or are pushed on a bicycle
 - > Sometimes women are discouraged from travelling at all due to lack of transport



> BACKGROUND

> Context in Zambia

- > Most of the rural population live far from a health centre
- > Delays can worsen the clinical severity of cases, particularly where complications exist
- > Global evidence suggests that implementing transport strategies alongside other interventions may contribute up to an 80% reduction in maternal deaths

(Murray and Pearson 2006)

> STRATEGY

- > **The MORE MAMaZ approach:**
 - > Close collaboration with District Health Management Team (DHMT)
 - > Comprehensive design work at the community level looked at:
 - > Distance
 - > Terrain
 - > The socio-cultural & economic context
 - > Accessibility of spare parts
 - > These findings informed the ETS design and ensured the programme built on what was already in place



> INTERMEDIATE MODES OF TRANSPORT

- > MORE MAMaZ used non-motorised

Intermediate Modes of Transport

(IMTs) to improve rural

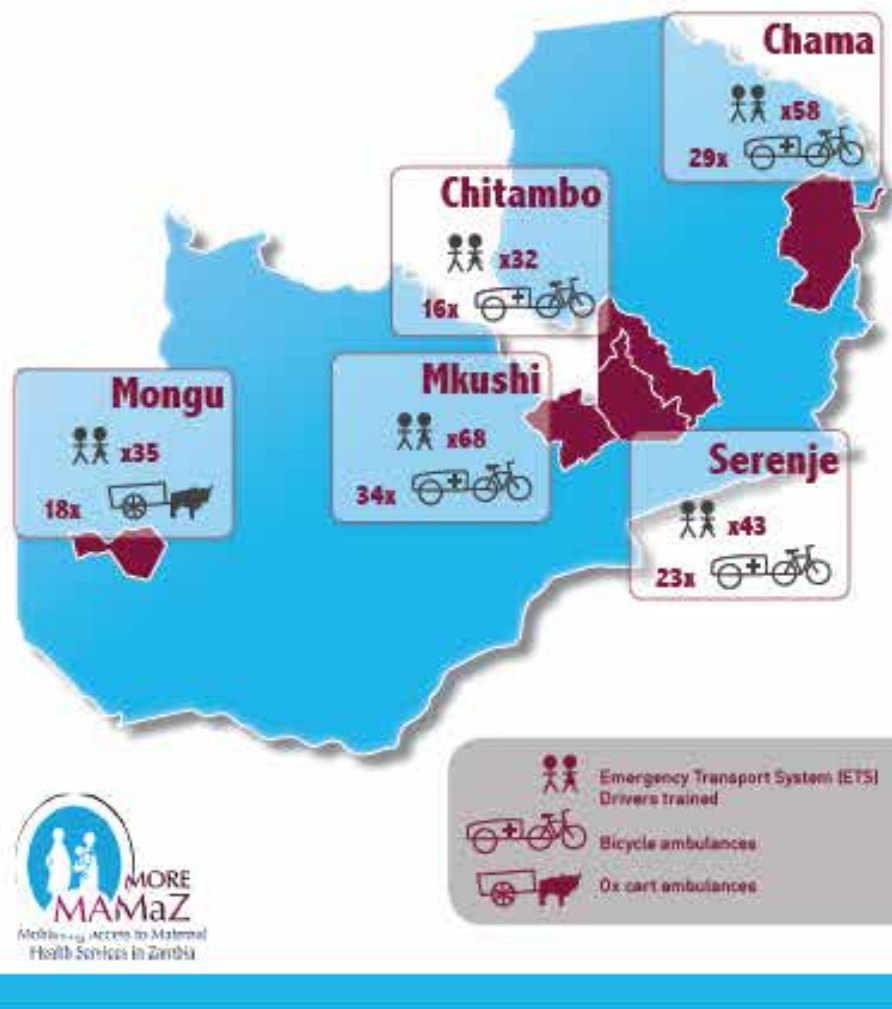
communities' physical access to

health facilities.

- > 102 bicycle ambulances were built

during MORE MAMaZ

- > 18 oxen cart and 36 oxen







> TRAINING (1)

- > Working closely with DHMT, communities were mobilised:
 - > ETS Riders and custodians of the vehicles nominated by the community
 - > Wider community engaged in discussions on how to access the vehicles, and on community stewardship of ETS
 - > Key message - community entirely responsible for maintenance, safe-keeping and responsible usage
 - > Neighbourhood Health Committees (NHCs) conducted demonstration rides to introduce the ETS to the community.
 - > DHMT's were involved in all aspects of the ETS, from the initial needs assessment work, to on-going monitoring, and review activities.

> TRAINING (2)

> Rider training included:

- > Role of an ETS volunteer
- > Recording trips in logbooks
- > Safe lifting and handling of mothers
- > Patient confidentiality
- > Basic principles of ETS maintenance
- > The practical dismantling and assembling
- > Ox cart maintenance
- > Oxen well-being and care (with support from vets office)
- > Action plan developments (general community meeting, demonstration ride and building of shelters



> RESULTS

> Improving access and building community

cohesion:

- > Communities can now access transport
- > Feedback from communities and DHMTs suggests that ETS is highly valued
- > ETS riders have increased social status in their communities
- > The community-managed approach helped to strengthen community cohesion.

“Even if they come at 1am, they will find the bicycle ambulance here. We saw the maternal danger signs and know that the bicycle ambulances have reduced maternal deaths. What motivates me is that I can reduce maternal deaths in my community.”

ETS Rider

> RESULTS

> Headlines:

- > Between September 2014 and June 2016, **3,647** pregnant women benefitted from the ETS.
- > 91% were normal deliveries and 9% had a maternal complication.
- > Highlights rural communities' considerable reliance on ETS for both emergencies and non-emergencies.
- > Women were able to rely on ETS '24/7'; 41% of the recorded transfers happened at night.
- > Endline survey: all those who had a maternal complication survived, while 96% of babies survived.
- > The percentage of women delivering at a health facility increased from 64% at baseline to 89% at endline.



'I am very happy that we have the BA in our community. As the head rider, I am committed to transport women any time, any hour, any day. I am a rider for life and nothing will stop me from doing this work'.

**ETS Rider,
Chama District**

"Being an ETS rider brings me joy as I save not only mothers' but babies' lives. Once I had a sad experience in my family. A family member died due to lack of transport and I have never forgotten. Now we have transport and there are almost no home deliveries."

ETS Rider, Serenje District

> LESSONS LEARNED

- > Community participation is vital
- > ETS needs to be suitable for the terrain, culturally appropriate and easy/affordable to maintain
- > Ensure that spare parts are readily available
- > Link to saving schemes or income generating activities help finance ETS repairs
- > Working with oxen (or any animal-pulled carts) is challenging. Sourcing and transporting oxen to intervention sites, providing vaccinations and on-going care of livestock need to be considered

ETS works best when implemented as part of a broader demand creation and community empowerment effort that addresses all demand-side barriers to use of MNH services simultaneously

> **POLICY IMPLICATIONS**

> Our key messages

- > The referral gap between communities and the facility needs to be addressed - specific, budgeted activities need to be implemented
- > This needs to be acknowledged in health policy and strategy
- > Replacement costs for ETS vehicles should to be considered in national or district health budgets.
- > A focal point is needed within the MOH and in DHMTs for all activities that help strengthen the community health system, including community-based emergency transport systems
- > To avoid procurement of inappropriate ETS vehicles, government departments and development partners should use locally appropriate and evidence-based ETS solutions

> THE ROAD AHEAD: INCREASED INCLUSIVENESS IN ROAD PROJECTS

MODERATED DISCUSSION:

- > Tony Greening
- > Gina Porter
- > Caroline Barber



> TONY GREENING

- > How can new technology, such as mobile technology, make road and transport service research more accessible and more participatory for local communities?



> GINA PORTER

- > Are there specific issues associated with engaging women in communities?



> CAROLINE BARBER

- > How does Transaid see active action participation research?



> **FOR ALL PANELLISTS:**

- > How do we take community-based research and translate that into information that is seen and heard by governments and donors?



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