

## Safe and sustainable transport for rural communities

Dear Colleague,

We would like to extend our best wishes for 2017 and we are pleased to provide you with the January edition of the ReCAP e-Newsletter. This edition covers our AfCAP activities in Ghana, includes an overview of ReCAP Gender Mainstreaming activities in both Asia and Africa, an introduction to the second phase of collaboration between ReCAP and the Partnership for Sustainable Low Carbon Transport (SLoCaT) to advocate for rural access at the multilateral levels and the AfCAP regional project on Economic Growth through Effective Asset Management.

We wish you a pleasant read and encourage you to share this newsletter with your peers and colleagues.

The ReCAP team

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## Building the tools and skills for improved rural road asset management in Africa

The Economic Growth through Effective Road Asset Management (GEM) project is one of ReCAP’s current transformative regional research and capacity building projects. GEM aims to achieve economic and social benefits for local communities as a result of improved local road asset management.

### Background

GEM’s ethos is to foster self-reliance in road agencies in terms of the management of their road assets and encourage greater accountability to road users and other sector stakeholders. The approach of the project is therefore to facilitate road agency driven improved performance in road asset management, rather than to impose any specific or pre-conceived road asset management systems or institutional, management and funding arrangements.

To achieve this, the project is engaging with local rural road authorities and providing them with the tools and training to self-assess areas for improvement in their road management over time. At the same time the performance of the road agencies' rural road networks, in terms of condition and socio-economic benefit, is being monitored. It is expected that by utilising this approach a rural road authority can identify and address those areas of road management which can have the greatest impact on the performance of their rural road networks over time and by so doing realise improvements in terms of the service provided to road users and local communities.

### **Implementation Phase**

Following the Project's formulation phase, during which the project team developed the tools necessary for road authority self-assessment, the project has been rolled out in local districts of the three partnering countries Sierra Leone (Tonkolili district), Uganda (Kamuli district) and Zambia (Chongwe district). The Department of Transport and Public Works, Western Cape Government, South Africa also participates in order to provide the selected AfCAP countries with an exemplar of best practice in rural road asset management.

As part of the roll out process, Rob Geddes (Team Leader) and Kingstone Gongera (Maintenance Expert) visited each of the project areas in July 2016 to meet with key stakeholders to discuss the project's objectives and research methodology.

In July and August 2016, the project team's Road Condition Monitoring Expert (Charles Bopoto) conducted follow up visits to each region to train local road authority staff in the data collection methodologies required to assess rural road management performance and rural road condition. The project team's Rural Transport Economist (Camilla Lema) will visit the project areas in December 2016 and January 2017 to assist the roads agencies with the collection of socio-economic baseline data on the project roads.

Following roll out, staff from the three rural road authorities have been enthusiastically engaging with the project. The Tonkolili District Chairman and his council have become heavily involved in making the project a success. The Sierra Leone Road Authority (SLRA) has assigned its engineer based at District level to assist with the project activities as well as normal routine management functions. The engineer has a fully equipped office as well as motorbike transport. The initial self-assessment of the maturity of asset management practices within the SLRA has been completed and is shown as a radar diagram in Figure 1.

In Uganda there has been a positive uptake of the inventory and condition survey forms, with modifications to suit local conditions. Road inventory, condition and socio-economic data collection is underway in Kamuli district and is anticipated to be completed by the end of January 2017.

In Zambia excellent cooperation between the Road Development Agency (RDA) and Chongwe District has enabled significant progress to be made in all planned activities. The project network had been defined and mapped, inventories of over 200 structures (culverts and bridges) completed and road condition surveys undertaken.

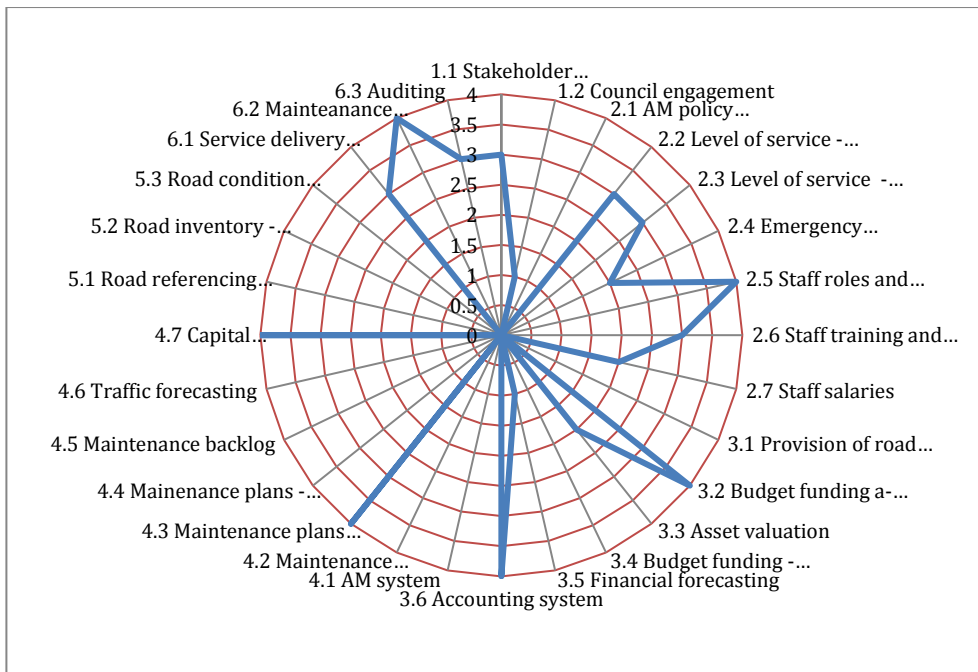


Figure 1: The initial self-assessment of the maturity of asset management practices within the SLRA.

### Project Implementation Team (PIT) meetings

Project Implementation Team (PIT) meetings, held periodically, are central to the project's ethos. The PIT is composed of representatives of the participating local road authorities, who report progress to date, representatives of other AfCAP partner countries, and the project team. The PIT meetings thereby engender a spirit of buy-in, co-operation and competitiveness.

The first PIT meeting was held in Caledon, Western Cape, South Africa, during the week of the 14th November 2016. The meeting was very well attended with representatives of 13 of the current 15 ReCAP member countries, including 2 in Asia. Two other AfCAP regional projects, on Climate Adaptation and on Using High-Tech solutions for Road Network Assessment (Satellite Imagery) respectively, were presented to the audience by their leading researchers. There are a number of similarities between all three projects in terms of the types of data collected and the means of so doing. It was therefore agreed that a mechanism for sharing relevant data and know-how between all three projects could be usefully established.

### Enhancing the Capacity of University Researchers

Capacity building is an integral part of the project. In addition to providing advice and know how to local staff to improve local asset management performance, capacity building also involves developing the careers of two researchers who are undertaking research degrees at the University of Birmingham. Their research projects are intimately linked to the main objectives of GEM.

Peter Kome, who is seconded from the SLRA, is undertaking a research degree that seeks to establish a robust means of improving road asset management in rural road authorities. Utilising the results of the self-assessment exercises carried out as part of the project, his research will establish an effective gap analysis methodology which can be used to identify and prioritise areas of a rural road authority's asset management to best improve road user satisfaction.

Robert Kakiiza is an independent consultant based in Uganda with intimate knowledge of Uganda's rural roads, gained through working as both a District Engineer in rural Uganda and latterly for the Ministry of Works and Transport. The focus of Robert's research is to develop a framework which can capture on a

common scale both economic and social benefits of investment in rural roads, so that decision makers and politicians can better understand the true value of these roads. Robert will therefore be making extensive use of the socio-economic data collected as part of GEM to form and prove his models. Both Peter and Robert are engaging with the project's data collection activities in their respective countries.



Photo: Robert Kakiiza working on collection of socio-economic data in Kamuli District, Uganda

*For more information, please contact team leader Robert Geddes at [rgeddes@cdsafrika.com](mailto:rgeddes@cdsafrika.com) or knowledge lead Michael Burrow at [m.p.burrow@bham.ac.uk](mailto:m.p.burrow@bham.ac.uk). Full project documentation can be found at the dedicated webpage: [Economic Growth through Effective Road Asset Management](#).*

*The views expressed in this article are of the authors only and do not necessarily reflect the views of ReCAP or Cardno Emerging Markets (UK) Ltd, for whom the post was prepared.*

## **Expanding our gender mainstreaming toolbox: new methods in rural transport research**

ReCAP's Gender Mainstreaming Research project cluster incorporates seven research teams, working across eight countries. The themes of these cross-cutting, gender and social inclusion projects were introduced in ReCAP's e-Newsletter of June 2016, and further detail provided in the e-Newsletter of October 2016. The Inception Reports for the majority of these projects are now available from the ReCAP website.

### **Networked research**

To leverage synergies and knowledge sharing through 'networked research' or a 'project cluster' approach, ReCAP has initiated a 'Google group' for the researchers. This enables the teams to share their progress and challenges and learn from each other. Some outcomes of the discussions from the Google group will be fed into [GATNET](#), the gender and transport list server, and shared through social media to encourage engagement with the wider community of researchers, practitioners and policy makers in gender and transport issues.

The findings emerging from the inception phases of the research projects have provided interesting insights on how different rural transport initiatives in several countries have impacted on gender equality. For example, existing stereotypes of women and men and their roles in the family and community have tended to

constrain the transformative impact of gender mainstreaming programmes. This important factor will be explored further as the research progresses.

### **Innovative approaches and methodologies**

In addition, the teams are adopting innovative methodologies and research tools. For instance, a research project (NEP2044D) being implemented by Women in Science and Engineering in Nepal (WISE Nepal), is collecting qualitative data using an 'immersion' method, which is similar to the participant observation methodology<sup>1</sup> favoured by anthropologists and sociologists. This type of research requires a particular set of skills and attitudes. With a study team comprised primarily of engineers with little social science research experience WISE Nepal provided initial research training on the specific methodology, ultimately building the capacity of the women engineers of Wise Nepal in the long term. The training comprised two days of classroom training, two days of practical immersion (trainees stayed for two days and nights within a rural community where there had been an infrastructure intervention), and one day of reflection. Feedback from the trainees confirmed that the training improved their knowledge of qualitative research methods, immersion methods and the research tools. Trainees "also believed that the sessions on listening and conversations, assumption exercises and understanding and mitigating biases would be useful, not only to gather insights during the main study... but in their personal life as well"<sup>2</sup>.

Another research project in the cluster (ETH2044E) is studying gender mainstreaming in labour-based rural road construction in Ethiopia. It is being implemented by a team from MetaMeta and Mekelle University. The researchers are using two innovative methodologies – 'Storytelling with Photovoice' and the 'Well-being' social survey method based on the '*El buen vivir*' methodology developed in Latin America. The latter is a depart from conventional interview or focus-group discussion methods. As the research report explains, it is a method that "creates a connection between the persons interviewed and the person interviewing"<sup>3</sup>. It is described as "sharing each others lives for a while and mutual learning"<sup>4</sup>. In this method "both parties are equal. Hierarchy is removed by the way one is introduced, how one moves around (taking interest in the activities in the house), body language (not sitting separately, no alienation by using note books) or the mutual asking and comparing one's lives (showing family pictures for instance). Well-being is the central interest – what drives people in their personal life, what are their interests, hopes and concerns. The social research themes are understood in the context of the lives of the people and not separate from them".

MetaMeta's use of Photovoice involves providing women an orientation on taking pictures and video clips, using basic devices such as their own mobile phones, and motivating them to use them over the project period. Use of this methodology will develop a steady stream of visual data over the project period, which can be used for analysis as well as documentation and dissemination purposes. It is designed to elicit a higher degree of participation of women in the project activities, thereby also contributing to their sense of empowerment.

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<sup>1</sup> <http://www.qualitative-research.net/index.php/fqs/article/viewArticle/466/996>

<sup>2</sup> WISE Nepal (2016). Draft Immersion Training Report, not yet published.

<sup>3</sup> MetaMeta (2016). Draft Inception report, not yet published

<sup>4</sup> *ibid.*



*Photo: Kebraleme Arzawi participated in a 'Photovoice' exercise in her village in Ethiopia (Photo: MetaMeta).*

More information on these and other gender mainstreaming tools will be available from the various project reports, finalised versions of which will be available on the ReCAP website. There will also be discussions on methodologies and other issues on the GATNET, Facebook and LinkedIn forums.

*For more information, please contact Paul Starkey, ReCAP Transport Services Research Manager, at [paul.starkey@cardno.uk.com](mailto:paul.starkey@cardno.uk.com).*

## **Ghana quickening the pace of rural infrastructure and transport research**

More than 50 percent Ghana's population reside in rural communities, making rural transport crucial to Ghana's development. The Department of Feeder Roads (DFR) under the Ministry of Roads and Highways (MRH) manages a network of 42,054km of rural roads in Ghana. With a current road condition rating of 35% good, 34% fair and 31% poor and with only 2% (840.9km) sealed sections, protecting the remaining 41,213.1km of gravel and earth roads is a major challenge. These roads are susceptible to high rates of deterioration from climatic effects especially in the face of limited funding for effective maintenance regimes. Rural mobility is also characterised by inefficiencies, which affect the socio-economic wellbeing of these communities.

On 2 December 2015 the DFR signed an Memorandum of Understanding under the AfCAP phase 2 programme to solicit assistance for evidence based research to guide rural transport development in Ghana. Further to this, Ghana has made significant progress on the implementation of eight identified rural road research projects with two already completed, four ongoing and two at the procurement stage. The research themes, which span infrastructure and transport services, also include cross cutting issues as detailed below:

### **Infrastructure Research projects**

The quest for sustainable pavement options forms a significant aspect of the research themes and the DFR is currently implementing three key projects on this with the overall objective of mitigating erosion and drainage problems and providing all-weather access with the use of locally available materials.

### **Training in DCP DN Method:**

The DFR commenced this component of the AfCAP programme with capacity development in the application of the Dynamic Cone Penetrometer Design Method

(DCP) as an alternative for other pavement structural design methods. This method avoids the use of direct correlation with the CBR test by utilising the cone penetration rate (DN value) obtained directly from DCP measurements to quantify the in-situ strength of materials. In total, 30 engineers have been trained, with 25 from Ghana and 5 from Sierra Leone. The trainees were given the background to the DCP-DN design method and design principles for Low Volume Sealed Roads and Environmentally Optimised Design. Field training on DCP tests were conducted, together with laboratory testing of pavement materials and an introduction to and use of the AfCAP LVR-DCP Pavement Design software.



**Practical exercise on Tinkong – Konko road**

***Training of Trainers in DCP DN Method:***

A follow up training of trainers (ToT's) activity, inclusive of actual design, construction and monitoring of a demonstration site to facilitate a wider application of method, is ongoing. This activity includes eight engineers with two representatives each from Sierra Leone and Liberia. This activity aims to enhance capacity in use of the method by demonstrating practical tasks involved to enable the trainees carry out these tasks correctly and pass on this knowledge to their peers.

***Alternate Surfacing for Steep Hills Phases 1 and 2:***

A study in pavement options is concerned with alternative surfacing for steep hill sections. A scoping exercise was conducted under a phase 1 component which identified 18 surfacing options categorised under concrete, bituminous and stone settes/cobbles. Four preferred options are to be tested under a subsequent project, with demonstration sites to assess performance. This second phase project is at an advanced stage of procurement.



Erosion Caused Gullies On Teiwanya-Sekasua Road Section

### ***Roller Compacted Concrete:***

A study on pavement options is investigating the use of Roller Compacted Mass Concrete (RCC). This project aims to develop a suitable mix design for RCC, with optimal compressive strength for road pavement construction using local materials. It also involves trial sections, which will inform the final output of the project: specifications and guidelines for use by DFR.

### **Transport services research**

#### ***Research on Rural Transport Diagnostics:***

This research is to diagnose rural transport service needs by rapid assessment. The aim of the study is to provide a better understanding of rural mobility needs from the community's perspective and recommendations on areas for further research. Procurement is ongoing.

### **Research Into Cross Cutting Issues**

#### ***Identification of Hazardous Road Sections:***

Research to inform a framework for the identification of hazardous sections on rural roads is ongoing. The framework aims to mitigate the average 1,800 lives lost annually through road accidents in Ghana. The focus of the research is on engineering-related causes of accidents, especially on unpaved roads sections. An Accident Blackspot Management System, based on the iMAAP system developed by TRL, has been used to identify economical mitigation methods for addressing identified hazards.

### **Way forward**

Ghana is also a demonstration location of two AfCAP regional projects. These are projects to introduce climate resilient measures for rural road engineering and the use of effective high tech solutions for road management with satellite Imagery.

A study to develop a locally manufactured DCP through a PhD programme with a local university and the development of a Bridge Management System has been earmarked as priority themes for future research. The uptake of ReCAP supported

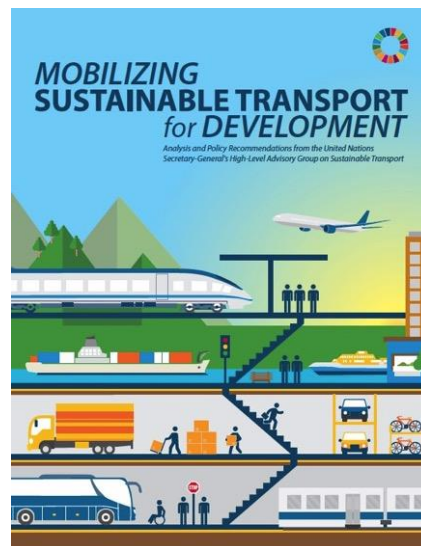
research outcomes will enable the Government of Ghana to improve rural mobility and access and enhancing sustainable rural development.

*For more information please contact Mrs Paulina Agyekum, AfCAP Regional Technical Manager for Western Africa, at [Paulina.Agyekum@cardno.uk.com](mailto:Paulina.Agyekum@cardno.uk.com).*

Rural access advocacy

## **UN Emphasizes Importance of Rural Transport as Key Driver to Fulfil 2030 Agenda Promise to “Leave No One Behind”**

In 2014, United Nations Secretary-General Ban Ki-moon announced the establishment of a [High Level Advisory Group on Sustainable Transport](#) (HLAGST) to promote sustainable transport that is in line with inclusive and equitable growth, social development, protection of the global environment and ecosystems, and addressing climate change. The HLAGST has delivered its recommendations in October 2016 through the [Global Sustainable Transport Outlook Report: Mobilizing Sustainable Transport for Development](#).



The report demonstrates how all modes of transport, in both developing and developed countries, can drive sustainable development and meet the needs of people in their personal and economic lives while respecting the ability of future generations to meet their needs. The report highlights the importance of rural transport as a key driver in solving the Last Mile challenge and enabling poor communities to rise out of poverty and overcome social inclusion. This will help fulfil the promise of the 2030 Agenda for Sustainable Development to “leave no one behind”. This “Last Mile” is defined as the last leg of the supply chain and is often less efficient, comprising a significant part of the total costs of moving goods.

The report emphasizes the importance of taking an integrated approach to sustainable transport by including short- and long-range, intra- and inter-city, urban and rural, and passenger and freight transport, and all modes in transport. It points out that urbanisation must be considered “in the context of the entire global population, remembering that today, in some developing regions, the majority of the population is still residing in rural areas.”

Rural communities in developing countries are “often completely disconnected from the major roads, rail lines, and public transport options that enable access to the economic and social activities and opportunities in cities.” Therefore, transport system must be integrated to meet the needs not only for urban users, but for those who are living in the rural areas.

ReCAP favours a pro-poor approach and has several research projects that look into improving the “First Mile” transport; this is the segment of transport that links smallholder farmers to the nearest motorable road or collection point, often critical for perishable produce to get to market in time. The First Mile transport often comes at disproportionate costs to smallholder farmers.

The UN report outlines transport as a “driver as well as a market of economic development” by enabling individuals and communities in the rural areas to “rise out of poverty and overcome social exclusion, connecting goods to markets and linking rural areas and market towns to large cities and the global marketplace.”

Quoting Article 9 of the UN Convention on the Rights of Persons with Disabilities, the report states that transport, in rural and urban areas, is an essential measure to enable people with disabilities to live independently and participate fully in all aspects of life. Safe, accessible, and reliable transport services are “a lifeline” for “all vulnerable groups, as well as for migrant communities and people living in remote and low density rural areas.” A case study on a connectivity subsidy program in Chile is presented in the report to show how government intervention can help provide free bus transport for handicapped children from remote areas and also enable a competitive environment for transport operators serving rural areas.

With the [17 Sustainable Development Goals \(SDGs\)](#) having been officially adopted in September 2015, it is clear that rural transport has a unique position in the 2030 Agenda. Although there is no dedicated target on rural transport, there is still a considerable linkage and contribution between rural transport and SDGs 1 (No Poverty), 2 (Zero Hunger), 3 (Good Health and Well-being), 4 (Quality Education), 5 (Gender Equality), 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 12 (Responsible Consumption and Production) and 13 (Climate Action). In addition, there is a specific indicator for rural access under Target 9.1 in the [list of proposed indicators](#) by the International Advisory Expert Group on the Sustainable Development Goals.

The High-Level Political Forum 2017, "Eradicating poverty and promoting prosperity in a changing world," will be held on July 10 to 19, 2017 in New York to review SDG no. 1, 2, 3, 5, 9, and 14. The [Partnership on Sustainable, Low Carbon Transport \(SLoCaT\)](#), under its Phase II collaboration project with ReCAP, will continue to promote the implementation of sustainable rural access in the 2030 Agenda in the coming years and is expected to contribute to the discussions in July in New York.

*For more information on the project, please contact Ms Alice Yiu at [alice.yiu@slocatpartnership.org](mailto:alice.yiu@slocatpartnership.org) or visit <http://www.slocat.net/ruraltransport>.*

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## **SHORT RECAP NEWS**

### **AfCAP and AsCAP Steering Committees meet jointly in Kathmandu, Nepal**

Hosted by the Nepal Department for Local Infrastructure Development and Agricultural Roads (DOLiDAR), the AfCAP and AsCAP Steering Committees convened their 2<sup>nd</sup> joint meeting in Kathmandu, Nepal on 6 and 7 December 2016. The meeting was used to discuss overall progress of the ReCAP programme and to provide a platform for partner countries in Africa and Asia to exchange views and learn from each other. The Steering Committee members were joined by representatives of DFID, the ReCAP Technical Panel and the Project Management Unit.




**ReCAP** All committees, panel and PMU  
 Kathmandu, 6 December 2016

### ReCAP signs Memorandum of Understanding (MoU) with the Government of Myanmar

ReCAP's Programme Director attended the signing of the MoU between ReCAP and the Department of Rural Development (DRD), the Government of the Republic of the Union of Myanmar. This makes Myanmar an official partner of the Research for Community Access Partnership. The team looks forward to working closely with DRD over the next 3 years. Two initial projects have been identified; one on developing locally appropriate rural road standards and specifications and the other to develop a local DRD Transport Research Unit. These projects are currently in the procurement phase.



### AfCAP to be present at the T2 conference in May 2017 in Livingstone, Zambia

The AfCAP programme will be present at the upcoming T2 conference, held in Livingstone, Zambia on 8-10 May. AfCAP plans to hold a number of workshops and will be present with an exhibition stand. The AfCAP Steering Committee will use the occasion to convene its meeting on Thursday 11 May.

## UPCOMING EVENTS AND CALLS

Event	Venue	Dates
<a href="#">10<sup>th</sup> EST Forum for Asia</a>	Vientiane, Lao PRD	ReCAP/UNCADR/SLoCaT pre-event: 13 March Forum: 14-16 March 2017
<a href="#">8th Africa Transportation Technology Transfer Conference</a>	Livingstone, Zambia	8-10 May 2017
<a href="#">PIARC International Seminar "Asset Management for Rural and Low Volume Roads"</a>	Santa Cruz de la Sierra, Bolivia	May 2017
Call for abstracts/papers	Venue	Dates
<a href="#">IRF World Meeting 2017 Call for papers</a>	Delhi, India	14-17 November 2017 Abstracts deadline: 31 January 2017
<p><b>Tenders:</b> Please keep an eye on the <a href="#">Tender Section</a> of the ReCAP website for the latest tenders and opportunities.</p>		



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