

## Safe and sustainable transport for rural communities

Dear Colleague,

We are pleased to share with you the March edition of the ReCAP e-Newsletter. In this edition you will find reports on a range of activities that are taking place in the realm of the Asia (AsCAP) and Africa (AfCAP) Community Access Partnerships. The ReCAP team is gearing up for the upcoming **International Conference on Transport and Road Research**, taking place on 15-17 March 2016 in Mombasa, Kenya. The conference, organised by the Kenya Roads Board and the Materials Testing & Research Department of the Kenya Ministry of Transport and Infrastructure, is a first of its kind in Kenya and will include a number of AfCAP activities on the theme of rural roads and transport services. More information can be obtained from the conference website: [www.transportconferencekenya.org](http://www.transportconferencekenya.org).

Feel free to share this newsletter with your colleagues and we hope to greet you in Mombasa.

The ReCAP team

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Road and Transport Services Research:

### **Kicking off AsCAP Rural Road Research in South Asia**

The predecessor of ReCAP in Asia, the South East Asia Community Access Programme (SEACAP), was implemented in Vietnam, Laos and Cambodia from 2004 to 2008. The current Asia Community Access Partnership (AsCAP) builds on the fundamentals of SEACAP.

Initially, AsCAP issued a scoping study in January 2015, which assessed the potential of the rural road sub-sectors in Afghanistan, Bangladesh, India, Myanmar, Nepal and Pakistan to undertake AsCAP research. The study concluded that all six countries experience a rural access/poverty nexus in which constrained access,

particularly in the wet season, intensifies social isolation and economic marginalisation producing widespread rural poverty. The study further concluded that Bangladesh, India, Myanmar and Nepal would be more receptive of rural roads and transport services research and a 15% rate of return on the financial investments was estimated. There is a significant variation in research capacity among these four countries, with India, Bangladesh and Nepal being ahead of Myanmar in terms of undertaking research studies. Further analysis revealed that India has a substantial research infrastructure in place that can be used for the benefit of other countries in the region. It was agreed therefore that Nepal, Bangladesh and Myanmar would become AsCAP partner countries and that India was to be involved in regional initiatives.

AsCAP organised a Regional Meeting in April 2015 in Kathamandu, which was attended by representatives from Nepal, India and Bangladesh. In this meeting research concepts were identified, which were further elaborated and presented during a second regional meeting in August 2015 in New Delhi. The first meeting of the AsCAP steering committee took place in London in November 2015. The London meeting reviewed and confirmed the research projects of all countries and elected the AsCAP Chair.



*Photo: Paul Starkey*

AsCAP already concluded a Memorandum of Understanding (MoU) with the Government of **Nepal** and a National Steering Committee has been formed. Three projects were identified and one of the projects is in the stage of implementation. The Department of Local Infrastructure Development and Agricultural Roads (DoLIDAR) initiated a discussion towards establishing a research centre. AsCAP will be organising a workshop in April 2016 to identify other follow up projects.

*Photo: Paul Starkey*

**Bangladesh** also identified three research projects. One project is being tendered and the other two are at different stages of procurement. The Local Government Engineering Department (LGED) called a first meeting of its National Steering Committee in January 2016. AsCAP and the Government of Bangladesh (GoB) are in the process of formalising working relationships.

The political transition in **Myanmar** impacted progress in AsCAP related activities. Unlike other countries, the potential research projects and other interventions had to

be identified before concluding a formal MoU. AsCAP has agreed, with the Department of Rural Development (DRD), to launch a scoping study shortly, followed by formal negotiation and initiation of research activities.

**India** formed a National Consultative Forum with the aim of taking forward regional research initiatives and to get engaged with AsCAP activities. The Central Road Research Institute (CRRI) and the Prime Minister Rural Road Project (PMRRP) are closely connected to AsCAP, with both organisations participating in the regional meetings. Three regional projects were identified, which are currently under consideration within the AsCAP steering committee.

All of these initiatives are geared towards achieving the programme objective of promoting safe and sustainable rural access in Asia through research and knowledge sharing between participating countries and the wider community. As the activities unfold, you will be able to find the results in the Rural Access Library on the ReCAP website: [www.research4cap.org](http://www.research4cap.org).

*For more information on AsCAP activities, please contact Chandra Shrestha, Regional Technical Manager Asia, at [Chandra.Shrestha@cardno.uk.com](mailto:Chandra.Shrestha@cardno.uk.com). A copy of the AsCAP scoping study is available in the Rural Access Library on [www.research4cap.org](http://www.research4cap.org).*

Community of practice:

### **The establishment of the African Road and Transport Research Forum (ARTReF)**

Supported by the Africa Community Access Programme (AfCAP), thirteen African countries came together in February 2015 to explore means by which to stimulate cooperation in research and innovation in roads and transport in sub-Saharan Africa. This led to the establishment of the African Road and Transport Research Forum (ARTReF). The aims and objectives of ARTReF are to promote research and innovation in roads and transport through networking, coordination, collaboration, knowledge transfer and the provision of advice on policies for sustainable development in Africa.

Roads and transport are often viewed as the lifeblood of sustainable socio-economic development of a country or region. However, Africa faces many challenges with the provision and maintenance of road infrastructure and with the development and implementation of a fit-for-purpose transport system. The development and implementation of appropriate solutions for addressing road and transport challenges common to sub-Saharan African countries or regions requires effective and efficient cooperation and collaboration between countries. This is then also one of the motives that led to the establishment of ARTReF, whose specific objectives are to:

- Promote collaboration and coordination of road and transport research policy, inclusive of the lobbying for regional harmonisation and identification of strategic research needs;



- Facilitate science and technology development through research and innovation in Africa, inclusive of coordination of regional applied research projects and demonstration projects;
- Promote networking of resources and technical expertise at regional level; and
- Advise road authorities on road design, construction and maintenance, and on transport services.

In addition to the above, ARTReF will also strive to transfer knowledge to, and develop sustainable research capacity in its member countries, including the following:

- Development and management of a knowledge management system for its members, inclusive of the establishment of a database of transport information and documentation, and the establishment of networks by which to share research experience locally and internationally;
- Promotion of academic growth and training of research personnel, inclusive of interfaces with academic institutions; and
- Assistance to be provided to its members for establishing and sustaining research capacity.

The current members of ARTReF are national road and/or transport research entities, representing the following sub-Saharan African countries: Botswana, Democratic Republic of the Congo, Ethiopia, Ghana, Kenya, Malawi, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, South Sudan, Tanzania, Zambia and Zimbabwe, with three additional countries having indicated their interest in joining ARTReF, namely Lesotho, Rwanda and Uganda. The ultimate aim is to incorporate all sub-Saharan African countries in the membership base of ARTReF.

ARTReF members congregate twice a year at the General Assembly to determine the priorities and areas of activity for ARTReF. The first meeting of the General Assembly was held in Zimbabwe in May 2015 and the second meeting in South Africa in August 2015. The attendance of ARTReF members to both meetings was supported by AfCAP, which all members are appreciative of.

ARTReF is managed and its activities coordinated by an Executive Committee, appointed for a renewable period of three years by the General Assembly. The Executive Committee is represented by two members each from Eastern Africa (Ethiopia and Kenya), Southern Africa (Botswana and Zimbabwe) and Western Africa (Ghana and Sierra Leone) and supported by the Interim Secretariat hosted by the CSIR in South Africa. Current Members of the executive committee are:

- Mr Stephen K Kogi, Chief Engineer, Ministry of Transport & Infrastructure, Research Department, Kenya
- Mr Alemayehu Endale, Director of Research & Development, Ethiopian Roads Authority
- Dr Adewole Oladele, Transport Specialist, Botswana Transportation Research Centre
- Mr Francis Afukaar, Head of Traffic & Transportation, Building & Road Research Centre, Ghana

- Mr Tamba Amara, Chief Engineer, Sierra Leone Roads Authority
- Mr Actor Zonde, Chief Research Officer, Ministry of Transport, Zimbabwe



*ARTReF delegation at the CAPSA conference in August 2015*

At the second meeting held in August 2015, Eng. Stephen K Kogi, Kenya, was elected President and Chairman of the Executive Committee, while Eng. Alemayehu Endale, Ethiopia, was elected Vice-President. Furthermore, a survey was launched amongst the ARTReF members to identify the main challenges that each country is facing in providing acceptable levels of road infrastructure and transport services to satisfy their socio-economic objectives. The main challenges identified by the members to date are the following:

- Provision of sustainable transport infrastructure in a changing climate
- Disparity in materials testing standards across sub-Saharan Africa
- Cost-effective upgrading methods and technologies for unpaved roads, including:
  - Optimal use of local materials in road construction
  - Low-cost surfacings for rural roads
- Cost-effective maintenance strategies
- Pavement structures and revised material specifications able to cope with the impact of increasing traffic volumes and axle loading, and changes in tyre configurations

From the list of (preliminary identified) main challenges, there is ample scope to strengthen current levels of synergy between ARTReF and AfCAP, and to establish future cooperation between ARTReF and DFID's High Volume Transport Applied Research Programme, once this programme is initiated.

ARTReF's next General Assembly will be held in March 2016. This meeting will coincide with the International Conference on Transport and Road Research which will be held in Mombasa, Kenya, from 15 to 17 March 2016.

*For more information, please contact the ARTReF interim secretariat, Mr Benoit Verhaeghe of CSIR, at [bverhaeg@csir.co.za](mailto:bverhaeg@csir.co.za).*

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

Road research:

## **AfCAP sponsors improvements to WinDCP 5.1 pavement design software**

The WinDCP 5.1 software, developed by the Council for Scientific and Industrial Research (CSIR), South Africa, has been identified as an appropriate tool for pavement design of low volume roads (LVR). The increasing use of the Dynamic Cone Penetrometer (DCP)-DN method of pavement design has triggered a need to upgrade the CSIR WinDCP 5.1 software to take account of relatively recent developments in low volume road technology.

AfCAP commissioned CSIR to undertake the upgrading of the software. Practitioners and experts had raised various suggestions for improvement of the software during its application in the road design process and in the field. The improvements have now been incorporated in the new WinDCP software. A Peer Review Team (PRT) comprising of practitioners and experts was selected to review the improved versions of the software and user manual as per the agreed stages of development.



In between the development of the improved software, two separate review workshops were held in November/December 2015 and January 2016 with AfCAP, CSIR and the PRT. The aim was to provide a platform for CSIR to demonstrate the new improvements and for PRT to assess their effect on the design process and outputs thereof, which was preferable to the less effective approach of providing comments at the end of the process. The project was completed at the end of January 2016 with the final output being the newly named AfCAP LVR-DCP v1.00 software, with associated Software Help File (SHF).

The improved software and the SHF will be posted on the ReCAP website for use, free of charge, by registered practitioners, subject to conditionalities to be set by ReCAP in due course.

*For more information, please contact Nkululeko Leta, AfCAP Regional Technical Manager East and Southern Africa, at [nkululeko.leta@cardno.uk.com](mailto:nkululeko.leta@cardno.uk.com) or Morris de Beer of CSIR, at [mdebeer@csir.co.za](mailto:mdebeer@csir.co.za).*

Rural Access Advocacy:

## **Rural Access Features in the Ninth Regional Environmentally Sustainable Transport (EST) Forum in Asia; Kathmandu, November 2015**

The Ninth Regional Environmentally Sustainable Transport (EST) Forum in Asia was hosted by the Ministry of Physical Infrastructure and Transport (MOPIT) of the Government of Nepal and was co-organised by the Ministry of the Environment of the Government of Japan (MOE-Japan), the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP) and the United Nations Centre for Regional Development (UNCRD), in Kathmandu 17-20 November 2015. Over 350 participants, comprising of government representatives from 26 countries, attended the Forum. Furthermore a number of invited national and international organisations and donor agencies were present, including ReCAP.



*Photo: UNCRD*

For the first time the EST forum included a plenary session related to rural transport at which ReCAP was invited to make a presentation. The rationale for the inclusion of this session, facilitated by the Partnership on Sustainable, Low Carbon Transport (SLoCaT), was the recognised great need for improved rural transport for the 1 billion people worldwide lacking access to an all-season road. Nearly 80% of the extreme poor live in rural areas; and there is a lack of coordinated action among key sectors (e.g. transport, agriculture and health care) despite the fact that 30% of the global population will remain rural in 2030. Rural transport is also a critical enabler of several of the recently adopted Sustainable Development Goals (SDGs) and associated targets. Rural transport makes direct contributions to Targets 1.4 (access to basic services), 2.1 (access to nutritious food), 9.1 (reliable and resilient infrastructure) and 11.2 (sustainable transport systems). Rural transport also makes indirect contributions to Targets 6.1 (access to safe drinking water), 12.3 (reduction of food loss) and 13.1 (climate adaptation).

Efficient rural transport is crucial to ensuring food security while developing agriculture and reducing rural poverty. Reducing rural transport costs can raise farm-gate prices, increase farmers' incomes and reduce urban food prices. It can also facilitate delivery of farm inputs, increase agricultural yields and reduce post-harvest losses, which in India for example, amounts to approximately 40% of total production due in part to a lack of reliable rural transport options. Improved rural transport can support more efficient evacuation, relief mobilisation and rehabilitation. Importantly, investment in resilient rural transport infrastructure and services can progressively reduce government expenditures by limiting the extent of damages and losses during extreme events.

There were three principal presentations in the rural transport plenary session. Dr. Karl Peet, the SLoCaT Research Director, summarised the importance of rural transport in the context of rural development food security and poverty eradication whilst Manoj Shrestha, Team Leader, Road Maintenance, for the DFID-funded local Rural Access Programme provided valuable examples of practical rural transport application in Nepal.

The ReCAP presentation by Dr Jasper Cook, ReCAP Team leader, focussed on key principles of Low Volume Rural Roads (LVRRs) and the increasing importance of climate resilience for sustainable all-season access. He identified the principal challenge as being to achieve satisfactorily sustainable all-season access within realistic whole-life cost budgets and at the same time dealing with increasing climate threats. Engineering adaptations to counter these threats are available but the costs can be prohibitive; hence we have to be conscientious when spending our funds by implementing targeted interventions through spot strengthening priority road sections and structures. We also must recognise the crucial role of effective maintenance in countering climate impacts.

The lively discussion that followed the presentations identified some key aspects for advancing rural road networks, including community based management and maintenance, targeted investment with a phased approach to critical points in the system; continuing improvements in planning and engineering for these particular road networks and better exchange between government agencies, technical experts, political actors and the private sector.

The Forum emphasised the importance of raising the political priority of rural transport at national and global levels; prioritising funding streams for rural passenger and freight infrastructure and services including maintenance; accelerating efforts to increase resilience of all aspects of rural transport. The Forum confirmed that effective rural transport programmes require an active involvement of communities. Participants endorsed the continued integration of rural transport in the EST Forum.

In the context of enhancing resilience and livelihood security of rural community, the Forum recognised the key role of rural transport. Under the 2030 Sustainable Development Agenda, it is important to consider proper accessibility of rural community and farmers to essential utilities education and health facilities, market and work places. To this end, the Regional EST Forum in Asia should consider strengthening policy consultations in the areas of rural transport, sustainable development, and resilience. Efforts could be put to build stronger cooperation with a number of existing and new prospective partners of the EST process such as; UN ESCAP, DFID, the SLoCaT Partnership, ASCAP (ReCAP), ICIMOD; organisations specialised in rural and regional development planning, among others.

*For more information, please contact Dr Jasper Cook, ReCAP Team Leader, at [jasper.cook@cardno.uk.com](mailto:jasper.cook@cardno.uk.com). The ReCAP presentation and an extract of the Chair's Summary on the EST Forum Session on Sustainable Rural Transport for Resilient*

*Rural Community, Food Security & Poverty Eradication can be downloaded from the Rural Access Library on [www.research4cap.org](http://www.research4cap.org). Full documentation of the EST Forum can be found on the UNCDR website: <http://www.uncrd.or.jp>.*

## Short ReCAP News:

### AfCAP workshops at the ICTRR in Mombasa

AfCAP will be organising a number of rural access related workshops at the upcoming International Conference on Transport and Road Research, organised jointly by the Kenya Roads Board (KRB) and the Materials Testing and Research Department (MTRD) of the Kenyan Ministry of Transport and Infrastructure. The conference will be held on 15-17 March 2016 in Mombasa, Kenya, and includes:

- An AfCAP plenary round table panel discussion on the topic of Gender Mainstreaming in the Transport Sector;
- A workshop on Geo-metric Design and Road User Safety on Low Volume Roads;
- A workshop on New Specifications for the Effective Management of Rural Roads;

For more information on the ICTRR conference, please be referred to the conference website: [www.transportconferencekenya.org](http://www.transportconferencekenya.org).

### AfCAP welcomes new partner countries

At the AfCAP steering committee meeting in November 2015 three new partner countries were endorsed: Ghana, Uganda and Zambia. Activities are currently going on to establish national steering committees, to map the research needs and to initiate research and training activities in these countries. Furthermore, a Memorandum of Understanding has been signed with the government of Sierra Leone. The total number of sub-Saharan Africa partner countries that AfCAP works with now adds to eleven.



### How to keep informed of ReCAP tenders currently on the market?

ReCAP, the overarching programme for AfCAP and AsCAP activities, has a number of projects currently in tender. These are published on a dedicated section of the ReCAP website at [www.research4cap.org](http://www.research4cap.org). This page provides general information on the tenders and contact details to obtain further information. Furthermore, ReCAP tenders are announced through the various social media channels such as the [ReCAP LinkedIn group](#), [Facebook page](#) and through [@Research4cap on twitter](#). Follow ReCAP and never miss out on an opportunity!

## Upcoming Events and Calls

<b>Event:</b> International Conference on Transport and Road Research (including AFCAP workshops)	<b>Venue:</b> Sarova Whitesands Hotel, Mombasa, Kenya	<b>Event date:</b> 15-17 March 2016
<b>Call for Articles:</b> UNESCAP Transport and Communications Bulletin for Asia and the Pacific, No. 86		<b>Articles deadline:</b> 15 March 2016
<b>Call for Abstracts:</b> International Conference on Transportation in Africa 2016 edition	<b>Venue:</b> Ramada Resort, Accra, Ghana	<b>Event date:</b> 26-28 October 2016 <b>Abstracts deadline:</b> 30 March 2016



This material has been funded by UKaid from the Department for International Development, however the views expressed do not necessarily reflect the department's official policies.