Editorial
This newsletter coincides with the PIARC Congress in Durban and so we have taken the opportunity to highlight the growing link between DFID and its international partners in promoting knowledge transfer. The foreword from DFID introduces a new initiative (Transport Knowledge Partnership), which hopes to encourage the flow of knowledge and increase the direct involvement of developing countries. We are pleased to receive articles from two organisations with strong technology transfer programmes. Reports on research and implementation activities, news items and publications complete this issue, which we hope you will enjoy. As always, your comments would be welcome.

Foreword from DFID on Transport Knowledge Partnership

Knowledge dissemination and demand-led problem solving is central to DFID’s knowledge transfer objectives. DFID has been closely involved and supportive of the formation of knowledge networks. These enable practitioners to make informed decisions on policy, best practice and value for money for sustainable road and water transport development. DFID are engaged in the logistics of establishing a broad transport initiative, known as the Transport Knowledge Partnership (TKP), that intends to complement other initiatives in the sector, supporting the transfer of global transport knowledge. This will build on DFID’s substantial portfolio of transport research and successes in the sector. The TKP has the following general benefits:

- Funding agencies (including the private sector), researchers and end users co-ordinate effort and resources
- Development partners are closely involved in the knowledge transfer process
- Higher probability of successful implementation through involvement and support of local decision makers
- Networking is strengthened by providing opportunities for improved sharing and exchange of international best practice through national and international platforms
- Knowledge and related research needs are identified by users and co-ordinated internationally

This approach has a number of key benefits for DFID in that it provides:

- A more effective pathway for the dissemination of its existing wealth of transport knowledge
- A working model for knowledge sharing programmes that can be emulated in other sectors
- A mechanism for strengthening the influence of developing countries in international bodies
- A mechanism for sharing future funding of in-country identified road and water transport research

Contacts made during the pre-preparation phase have indicated considerable support for TKP both from the national and international community of practitioners. Importantly, strong endorsement for TKP has also been forthcoming from a number of key development banks and donors. DFID intends to consolidate its early progress and a Senior Transport Adviser within the central research team (CRT) will work with a co-ordinating secretariat to progress the initiative over the coming months. TKP will work with existing networks, organisations and groups that support knowledge sharing in the sector and where necessary will strengthen them. Furthermore, TKP will seek to increase opportunities to work with and through a range of development partners, including banks and donors, who can support the process at national, regional and international levels.

Peter O’Neill, DFID

Transportation Research Board

The Transportation Research Board (TRB) is reviewing ways to enhance its already considerable transport knowledge activities for the international community. One area of emphasis in the current review is on increasing the flow of transportation information between TRB and developing countries. DFID views this as an opportunity to engage TRB, a division of the United States’ National Academies, which include the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council, within the Transport Knowledge Partnership (TKP). While only informal discussions have taken place to date, DFID plans to continue this liaison in the months ahead, leading up to the TRB Annual Meeting in Washington DC in January 2004. This meeting normally attracts more than 9,000 transportation professionals from around the world and covers a variety of topics of interest to the developing world. TRB’s existing international knowledge-sharing activities, includes the production of a free weekly electronic newsletter, which reports on transportation research developments both within and outside the United States. It boasts a circulation of more than 11,000 and is read in more than 70 countries worldwide. Additional information on TRB, its Annual Meeting and the E-Newsletter is available at www.TRB.org.

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The FHWA and technology transfer

The Federal Highway Administration’s (FHWA) Office of International Programs works to implement technology transfer programmes and activities that meet the highest priorities of the FHWA, the U.S. transportation community and its international partners. The FHWA cooperates with 91 technology transfer (T2) centres, many modelled on their successful Local Technical Assistance Program (LTAP). These centres operate in 32 countries in Latin America and the Caribbean, Central Europe, Russia, Korea, and Southern Africa. In Africa, the FHWA has helped to expand the number of T2 centres within the Southern Africa Development Community (SADC) and supported the creation of the Association of Southern African National Road Agencies (ASANRA). FHWA also promotes twinning arrangements linking U.S. State Department of Transportation and LTAP centres with counterparts in other countries. Twinning accelerates technical exchange and professional development in developing and transitional countries. Important lessons are also learned from the developing world, such as the implementation of labour-intensive technologies for the construction and maintenance of low volume unpaved roads. FHWA is promoting links to the Transport Knowledge Partnership through its international programme. This and it’s participation in international organizations such as the World Road Association (PIARC) should encourage wider technology transfer between countries.

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7th April 2004, World Health Day focuses on SAFE ROADS

World Health Day is an annual event held by the World Health Organization (WHO). It aims to reach out and engage the general public internationally in health messages that are often known but neglected. The theme for 2004 is Safe Roads and its objectives are to:

- raise awareness about the health impact, social & economic costs of road traffic injuries
- highlight the particular vulnerabilities of certain groups of road users
- issue a call for action to increase efforts to prevent road traffic injuries
- build partnerships and collaboration for road traffic injury prevention

The World report on road traffic injury prevention, produced jointly by the WHO and the World Bank, will be launched on the day. It’s message is that road traffic injuries are a major but neglected public health problem requiring concerted multi-sectoral efforts for effective and sustainable prevention.

World Health Day will mark the start of a global campaign for road traffic injury prevention with events organised by governments, organisations and groups.

For further information, see the WHO website: www.who.int/world-health-day/2004/en

Urban transport strategy for Nairobi

Under the World Bank sub-sahara Africa transport policy programme (SSATP) a stakeholders national workshop was held in Nairobi in August. A major objective of the workshop was to identify policy measures that would assist with the changing organisation of urban transport services in Nairobi.

The workshop was attended by around 40 delegates representing various organisations in the private and public sector. Participants identified a wide range of problems and potential solutions and stakeholders developed an agreed strategy (action plan). This ranged from short term and detailed operational issues to longer term and more wide-ranging institutional reforms.

There was enthusiastic support for adoption of a more co-ordinated approach to the provision of urban transport services, through the establishment of a Nairobi Metropolitan Transport Authority, with the powers to plan, regulate and implement urban transport policies and programmes. With support from the World Bank, similar institutional arrangements have already been established in Dakar, Abidjan and Lagos.

Knowledge Base Training Materials

Following production of the Rural Transport Knowledge Base in 2001, the World Bank have commissioned the IDL Group to produce training materials that incorporate the socio-economic and infrastructural transport issues. The training materials include Trainers Notes, Presentations and Activity Sheets. They have been designed for use by transport practitioners with a training background, for a target audience of transport professionals from the public and private sectors and civil society. Designed for participatory learning the materials incorporate a wide range of ideas for group activities, issues to explore and facilitation methods. They aim to stimulate debate, while building on participants’ skills and experience.

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Partners in TKP

The Transport Knowledge Partnership is a knowledge sharing platform for equitable, efficient and productive transport development. It puts the demands and priorities of national stakeholders in developing countries at its centre and provides a rational implementation pathway for effective uptake of knowledge.

In achieving its goals, a key role of TKP will be to encourage effective networking between the existing structures, organisations and groups engaged in the sharing of transport knowledge for developing countries.

TKP will collaborate with international thematic programmes, initiatives and groups (International Communities of Practitioners or ICPs) that can further the aims of international partnership. ICPs that have a strong national representation (endorsed by government), cover a particular transport theme and have good geographic coverage will be key elements to the partnership. In some thematic areas the level of international networking is weak; TKP can work to address these gaps, and to strengthen the links with other ICPs.

Within the TKP networking framework, the key roles for the ICPs will be:

- assimilation and dissemination of best practice
- identification, prioritisation and facilitation of research
- knowledge sharing and management

The TKP role will be to encourage this process through its networks and core facilities. It could, for example, play a role in overcoming language barriers or facilitating interaction between ICPs.

TKP needs to undertake a dialogue with potential ICPs to identify the ground rules and expectations of partnership. TKP therefore welcomes enquiries from potential partners who share the ideals of its development.

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Community road safety education

To avoid neglecting those outside the school environment, DFID are supporting a study to develop and use community participation programmes in road safety education in four countries in Africa and Asia. This is considered to be a more sustainable pathway for disseminating such education to the urban and rural poor.

Road safety community education programmes have followed on from the use of conventional curriculum based school education. After consultation with each community using participatory learning and action techniques, education programmes are being prepared for testing in Ghana, South Africa, India and Bangladesh. These encompass a variety of educational methods and approaches and are being targeted specifically at non-school attenders, school leavers, and older people who may have never previously received any road safety education.

The long-term programme for the Leroro community in South Africa, being developed in conjunction with CSIR, is being initiated during a road safety week. The campaign will involve the whole community and include flip charts, handouts, poster competitions and participatory community theatre. The week will finish with a pedestrian safety day attended by selected dignitaries and include a safety march to raise awareness, particularly about the impact of alcohol and drugs on pedestrian safety.

Following implementation in each country, there will be a period of monitoring to evaluate the effectiveness of the programme on improving traffic awareness and knowledge, and in reducing road traffic and pedestrian accidents. A manual, aimed at transport safety practitioners, describing good practice Guidelines for conducting road safety education programmes in developing countries will be developed. This will describe methods to identify and understand a community’s roads safety problems, together with a selection of intervention materials that can be used to disseminate road safety education to the wider community in a sustainable way.

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DFID Project Reference: RB011 ‘Promoting road safety education through community participation’
Theme Objective: T1

Private sector funding for road safety in Bali

An ongoing programme of road safety improvements is being implemented in Bali using private, charitable funding.

The project has been running for two years and schemes have been completed at about 20 locations in and around the capital city, Denpasar. The source of funds is KeyMed, a UK based medical equipment company, that has been promoting safety for nearly 20 years, funding numerous road safety accident remedial schemes in countries around the world.

Bali has significant road safety problems, on an island where medical facilities are limited. The absence of local funding has been a significant constraint on the implementation of traffic management schemes in the past.

With consultants (Mike McKenna Consultancy), KeyMed have worked directly with the City or District Administration, rather than the Provincial or National Governments. For every scheme, consultations have taken place with all interested Government Agencies and the local community. Implementation time has been improved by an agreement which allows the consultants to appoint contractors directly, rather than contracts being awarded by the Government.

Schemes already completed under the initiative include major intersection improvements involving the installation of traffic signals, improvements to existing traffic signals and to the visibility, signing and markings on the many U-turns on the Denpasar bypass, new signs, markings and guard rails in the mountains and new centre line markings on the arterial route towards Java.

This initiative is very much in keeping with the Indonesian Government’s policy to encourage private sector funding for infrastructure improvements, with the added benefit that this funding is being made available on a purely humanitarian basis, with no loan repayment or local funding required. Clearly, the availability of funding is limited and every identified problem cannot be addressed, but a great deal has been achieved in a short time. A private-sector approach to managing the project and innovative contractual arrangements, combined with a willingness to work closely with the local community and Local Government Agencies at all levels, have been essential ingredients in its success.

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Residents of Leroro discussing their road safety problems

Centre-line markings in Tabanan district

Residents of Leroro discussing their road safety problems
Implementing labour standards in construction

Benefits from road construction and transport development tend to focus on the eventual increase in access to services and markets, or short-term cash injections from local job creation. With the construction sector being one of the largest employers of temporary workers globally, there is potential for influencing the livelihoods of (usually poor) construction workers through employment practices in the construction process - from procurement to completion.

Enhancing workers’ social, human and financial well-being can be promoted through commitment to, and application of, the International Labour Organisation’s (ILO) four core labour standards, together with another five wider labour standards. Meeting all of these promotes greater productivity through cooperative workplaces, increased motivation and improved health and safety. Their application impacts on poverty by reducing time lost through injury, meeting wage and benefit concerns and protecting skills and capabilities, particularly of women.

Construction companies, contractors and consultants all have a role in supporting principles of decent working conditions and monitoring the application of labour standards in practice. In reality though, mechanisms to ensure effective application and monitoring are often ineffective.

A recently completed DFID study on social aspects of construction (SAC) has piloted the application of labour standards in construction programmes in Ghana, India and Zambia. The approach involved government, private contractors, trade unions and NGOs working together to find ways of implementing labour standards through the contracting process, with the aim of enhancing the livelihoods of workers and helping them realise their rights.

The findings provide guidance on the collaborative process and contractual issues involved in implementation and monitoring of labour standards. They offer an opportunity to learn lessons for improving workers’ conditions through procedures in the planning and management of road and transport programmes. Drawing on the experience of the SAC study, a sourcebook on Implementing Labour Standards in Construction has been produced.

For further information and pdf of the sourcebook, see the website: www.lboro.ac.uk/wedc/projects/sac/index.htm
Rebecca Scott and Mary Jennings, WEDC
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Maintenance capacity building in Ethiopia

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FID are funding a 5-year technical assistance to the Ethiopian Roads Authority (ERA) aimed at achieving more cost effective road maintenance. Undertaken jointly by WSP and Scott Wilson, the assistance aims to enable existing District Maintenance Organisations to become commercial entities. This involves the separation of client and contractor functions.

ERA presently have inadequate resources to undertake the routine maintenance of a 16,400 km network of gravel and paved roads. One of the approaches to improve road conditions is to increase capacity not only by improving management efficiency but also by progressively introducing private contractors alongside ERA own-force units. A staged approach is being adopted. At present ERA perform all routine road maintenance except in high habitation areas where length-men are employed. Initially the shortfall in capacity will be taken up by introducing private contractors with ERA retaining their bulk share of the work. Over time the amount of work guaranteed to ERA will reduce as they start to compete against contractors for this share. The long term goal is that all maintenance work will be awarded through open competition and that there will not be a shortfall in maintenance capacity.

These measures will assist with the development of commercial and contractual skills, initially through internal performance agreements and subsequently by open competition. The private contractors are being trained and introduced following several approaches. These include labour based contracting, packaged works contracting for small emerging contractors, and larger term maintenance contracts for existing construction companies. The strategy also includes preparing the more competent firms towards introductory performance based assignments. The result should be an efficient, competitive governmental contracting organisation, a healthy and skilled private contracting industry and a management structure that ensures that Ethiopia’s considerable road infrastructure investment is preserved.

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Waterways and livelihoods

Waterways and livelihoods is a programme initiated by the International Forum for Rural Transport and Development (IFRTD) to promote greater visibility of rural water transport issues. Under this programme a DFID-funded research project has produced case studies in ten countries, culminating in an international seminar in West Borneo in April 2003.

The seminar called for the integration of rural water transport in mainstream policy and practice, highlighting the need to raise its profile and display a more accurate (positive) image. This will require the generation of more qualitative and quantitative data regarding the nature of rural waterway use, services, technologies and infrastructure. In addition, the sector needs to encourage discussions both internally and externally and share ideas and experiences. Exposure to different technologies at the seminar has already initiated dialogue, with participants from Madagascar keen to explore the more efficient engine technologies in Vietnam.

A web site www.ruralwaterways.org has been developed to provide a focal point for knowledge and experience, and a means to access people, organisations and further relevant information. Participants of the seminar have also formed an email discussion group through which they can continue to share new information, and advocate for greater visibility and integration of rural water transport issues. To subscribe to this group please send an email to ruralwaterways-subscribe@yahooogroups.com

Footbridge manual

Much essential rural travel takes place on paths, tracks and village roads. Generally, communities and/or local government are responsible for their upkeep. One of the most difficult problems they face is in providing and maintaining effective water crossings. The aim of this DFID-funded project is to produce a manual that can be used to help those providing technical assistance for the construction of simple footbridges for spans up to about 20m. This manual will cover bridges which have wide applications such as bamboo, timber and steel truss bridges, but for which no general manual has been found. The manual will provide details of designs to cater for both pedestrians and intermediate means of transport (IMT).

The project has so far concentrated on collecting design data. General data has been obtained from national park organisations in USA, Australia and UK and specific data from 5 case studies in Nepal, Indonesia, Laos, Malawi and Ethiopia. The latter have provided information on footbridges and bridges used for low-volume roads and also details of specific examples of the types of bridges to be covered by the manual.

The findings to date indicate that for natural materials such as bamboo and timber logs, the maximum span is around 6 to 8m and above this piers are needed. However, the life of these bridges may only be one to two years. Sawn timber and steel truss bridges provide longer spans and life. The latter are suitable for spans of 20m or more and are considered appropriate in a modular form similar to a simplified Bailey bridge.

A draft manual will be disseminated for review in the near future.

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DFID Project Reference: R01133 “Manual for construction of footbridges at district/community level”
Theme Objective: T3

Rural road surfacing research in Vietnam

A study of surfacings for rural (district and commune) roads has been commissioned by DFID following a request from the Ministry of Transport (MoT) in Vietnam. This results from concerns that gravel/laterite and (semi-) penetration macadam surfacings are not the optimal solutions for rural roads in many circumstances.

The WSP study identified the need to utilise a range of surfacing options in the various physical environments existing in Vietnam. Appropriate use of alternative surfacing options would achieve better use of local resources, and improve sustainability and whole-life-cost aspects of investment in rural road infrastructure. The generation of local employment opportunities, low equipment investment requirements and technology of many of the surfacing types should allow greater involvement of local communities and support government poverty reduction efforts. The low maintenance needs of many of the alternative surfacings options will also help to make their management more sustainable at district and commune level.

Intech and TRL are working with two local institutions, Research Institute of Transportation Science & Technology (RITST) and Transport Development and Strategy Institute (TDSI). With the financial support of DFID and the World Bank, they are planning and managing research and surfacing trials for the MoT in two Mekong Delta provinces and two in Central Coastal Region. Additional surfacing trials are planned for the Central Highlands and Northern Mountains regions.

New national standards will be developed, for rural road application throughout Vietnam, for a range of paving techniques including stone, bitumen, concrete, brick and stabilised soil.

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Bamboo bridge in Laos constructed by the local community for pedestrians and cyclists

Some paving options may have high initial costs, but low whole life costs.
Transport for poor farmers in Uganda

Aiming to improve the understanding of poor farmers’ transport needs, and develop suitable intermediate means of transportation (IMT) technology for rural communities, DFID have funded a research project within it’s Crop Post-Harvest Programme. The project partners include the Natural Resources Institute (NRI), Transport Forum Group, Uganda (TFG), TRL Limited and Silsoe Research Institute.

A baseline study conducted in three districts of Uganda highlighted the shortage of transportation means in rural communities. Bicycles are the main form and one of the principal physical assets owned by farmers, particularly in districts with flat terrain. A lack of donkeys, donkey-carts, tractors and trailers, cars and pick-up trucks was evident among the households surveyed, while the ownership of bicycle-trailers and wheelbarrows was very limited. Human porterage was found to be the most common mode of transport at community level in all three districts, and, unsurprisingly, farmers expressed a need for better availability of means of transportation. Although motorised forms of transport are available, farmers primarily use them for travel rather than transporting goods.

Participatory monitoring and evaluation by farmer groups are going to play a major role in the next stage of the project, when appropriate IMTs will be tested and validated.

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DFID Project Reference: R8114 Improved food crops marketing through appropriate transport for poor farmers in Uganda

Appraisal of IMT and transport services

The availability and usage of intermediate modes of transport (IMT) and transport services (TS) in sub-saharan Africa is patchy. The reasons are frequently unclear. The aim of this DFID-funded project was to develop a rapid appraisal method to predict the demand for IMT and TS and the inputs needed to promote demand.

Case studies that covered a range of usage of IMT were carried out in 5 countries (Malawi, Tanzania, Ghana, Zambia and Senegal) with an additional study in Malawi where different levels of TS were found on four feeder roads. Village meetings and roadside interviews with users and non-users of IMT and TS provided data on agricultural production and marketing, modes of transport used, ownership of IMT, transport needs and supply of IMT and TS. Demand for TS was based on the population served by the road and the number of road users for a particular range of conditions of traffic level, trip length and user incomes.

The main findings were:

- good agreement on the upper limit of transport load (tonne.km) that people were able or prepared to carry. Above this there was an increasing demand for IMT or TS
- an upper limit to the transport load carried by bicycle, above which an increasing demand for animal-drawn carts and TS was evident
- relationships found between level of ownership and months of income required to purchase IMT

Demand for IMT was generally rated as a lower priority than for TS
- up to 11% of the road’s catchment population used TS with significant variations for season, market days and traffic levels
- characteristics and operating costs of suppliers of TS were identified

The project has developed a methodology and quantified indicators to predict the demand for IMT and TS. This should lead to more effective demand appraisal for these means of transport in the future.

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DFID Project Reference: R7786 ‘Partnerships to improve the access and quality of public transport services for the urban poor’
Theme Objective: T3

Partnerships in urban public transport

Access to affordable public transport services is critical for the urban poor as it offers a way to reduce economic and financial deprivation and social and physical isolation. Urban public transport is a key link to access services such as health and education facilities and to secure other livelihood assets needed to sustain individual, household and community development.

With the aim of producing guidelines for policy makers and urban public transport operators to ensure that the poor enjoy greater access and a higher quality public transport service in the future, DFID have funded a study in Sri Lanka, Pakistan and Tanzania by WEDC, IIED and TRL, with research assistance provided by the University of Dar es Salaam, Sevanatha Urban Resource Centre, Colombo and Mr Attaullah Khan of Faisalabad.

Social exclusion of different groups in society (women, disabled persons, children) related to access and mobility were included in the study. The resulting guidelines highlight the need for a better understanding of the linkages between public transport and the impact on other services required by the poor to sustain their livelihoods. This can be assisted by agencies /organisations establishing relationships which can lead to formal and informal partnerships being developed.

Presently however, there is a lack of understanding about how such partnerships function to deliver transport services and what can be done to support and strengthen these relationships in order to improve accessibility and quality of public transport. The research team focused on formal and informal relationships in Colombo, Dar es Salaam and Faisalabad but found only a few examples of collaboration and, in general, many opportunities to improve public transport services were being ignored. The guidelines contribute to current knowledge by focusing on a number of issues at both policy and operational level. Identifying key stakeholders, understanding roles and responsibilities and analysing the working linkages and mechanisms used to deliver public transport services is fundamental. Existing partnerships can then be strengthened and
Recent publications

Reports
Overseas Road Note 1 (2003). Maintenance management for district engineers, 3rd edition. (TRL)

Papers

For copies of the above publications, please contact the relevant organisation. Limited numbers of TRL publications on DFID-funded research are free of charge to nationals of developing countries.

Email: international_enquiries@trl.co.uk.

TRL's International publications are listed on the TRL website: http://www.TRL.co.uk/1024/newsformDFID.asp

Recent additions to the Publications area:
• ORN1: Maintenance management for district engineers, 3rd edition
TRL have updated Overseas Road Note 1. The new edition is aimed at the district engineer in a developing or transitional country who does not have access to computer-based road management systems. The content has been enhanced to reflect the latest thinking on road network management practice.
The Note addresses the management functions of programming, preparation (design and works procurement), and operations management. It covers asphalt, cement concrete and unpaved (gravel) roads with traffic levels of up to about 5,000 vehicles per day. It recommends a system of management which is entirely paper-based but which can easily be computerised using simple spreadsheets if necessary.
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http://www.TRL.co.uk/1024/newsformDFID.asp

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