The International Forum for Rural Transport and Development

The International Forum for Rural Transport and Development (IFRTD) was set up in 1993 to promote an alternative approach to rural transport that meets the needs of rural people in developing countries.

This alternative approach means focusing outside the conventional reliance on roads and motorised transport, since many people in rural areas lack access to roads and cannot afford motorised transport. The Forum promotes the introduction of intermediate means of transport, the expansion of appropriate rural transport services and the improvement of local transport infrastructure such as paths and tracks. It advocates an integrated approach to rural transport problems that takes into account choices between making transport interventions and reducing transport needs by upgrading services and facilities.

The work of the IFRTD is supported by a number of donors including the Swiss Development Corporation (SDC), the International Labour Organisation (ILO), the Norwegian Agency for International Development (NORAD), the Swedish International Development Authority (SIDA), the Intermediate Technology Development Group (ITDG) and the Commonwealth Foundation. DFID participates in the Forum’s Advisory Committee and is co-funding an inter-regional research programme on gender and transport.

The Forum’s activities include the setting up of National Forum groups in several countries, publication of a newsletter, research programmes, workshops and seminars. For further information about the Forum and its activities, see its page on the World Wide Web, or contact:

IFRTD Secretariat
Tel: +44 (0)171 278 3670
email:ifrtd@gn.apc.org
http://www.gn.apc.org/ifrtd

Diary of Forthcoming Events

June 1997
Course: Roads and Transport in Developing Countries
30 June - 11 July 1997, Wokingham, Berkshire, UK
Organised by: TRL
Contact: Linda Parsley, Overseas Centre, TRL.
Fax: +44 (0)1344 770719

September 1997
2-11 Sept. 1997, TRL & Newcastle Upon Tyne, UK
Contact: Promotions Manager, International Seminars, The British Council (Oxford)
Tel: +44 (0)1865 316636,
Fax: +44 (0)1865 557368/516590

Course: Road Rehabilitation & Maintenance
15 Sept - 10 Oct 1997, Swaziland
Contact: Tim Newman, Crown Agents. Tel: +44 (0)181 643 3311, Fax +44 (0)181 770 0479.

October 1997
PIARC British National Congress
DFID Study Tour 28 Oct - 3 Nov 1997, UK.
Congress, 5 - 7 Nov 1997, Manchester, UK.
Contact : Colin Goodwillie, PIARC Secretariat.
Tel: +44 (0)171 921 4349, Fax: +44 (0)171 921 4505

December 1997
Training programme on Managing and Financing Rural Transport
(Sponsored by DFID and the World Bank)
1-11 December 1997, Washington DC, USA
Contact : Linda Parsley or Simon Ellis, Overseas Centre, TRL Fax: +44 (0)1344 770719

January 1998
77th Transportation Research Board (TRB)
Annual Meeting
11-15 January 1998, Washington DC, USA
Contact: Angelia Summons. Tel: +1 202 334 2934,
Fax: +1 202 334 2003

NEW TRL EMAIL ADDRESS
A new Email address is now available for general enquiries to TRL Overseas Centre:
Email: International_Enquiries@trl.co.uk
Individuals can still be contacted directly.

INTERNET
The text of all the DFID newsletters is available on the Internet on the DFID World Wide Web Home Page. At present they are listed under Publications but will in future be located under Research.
The address is:
http://www.oneworld.org/oda
Rural transport in sub-Saharan Africa

The sparse population and low incomes typical of rural areas in many developing countries often lead to difficulties in providing and maintaining transport infrastructure.

Sub-Saharan Africa, where rural transport problems are particularly acute is the focus of a DFID funded project into improved transport planning methods and guidelines. The project is managed by IT Transport, with inputs from TRL and Silsoe College, and aims to extend or adapt traditional planning methods to become more appropriate for low-volume roads, footpaths and tracks. It has four main components, briefly described below:

- Most village transport takes place on footpaths or tracks where simple improvements can bring significant benefits to villages. However footpaths and tracks are not “narrow roads” and road building techniques cannot be transferred directly. IT Transport have carried out field investigations in Tanzania to assess the benefits of footpath improvements. It is hoped to develop simple guidelines on the formulation and design of projects involving path and track improvement.
- Field surveys in Tanzania, concentrating on earth roads and tracks, identified the effects of poor initial construction standards, minimal maintenance, high rain-fall levels and, in some cases, inappropriate traffic types. Silsoe College have measured the degree of rut formation caused by a range of vehicle tyres carrying various loads when operated on a reproducible soil profile representing a fairly soft earth road. It is now possible to calculate a total cost figure for each combination of vehicles and infrastructure. A computer model has been produced and calibrated, which should assist planners in evaluating alternative vehicle-infrastructure-maintenance regimes.
- In sub-Saharan Africa, labour-based methods are often more economic than conventional equipment-based methods for the rehabilitation and maintenance of low volume roads. Cost comparisons are often difficult, with much of the data being more than a decade old. An up-to-date comparison of construction costs is being carried out by IT Transport in Ghana where comparable feeder roads are being built using labour-based and equipment-based contractors. The aim is to develop appraisal tools to allow rapid assessment of the relative cost-effectiveness of these methods.
- Conventional road appraisal methodologies use road surface roughness as the main indicator of road access condition. However, research and experience suggests that seasonal road closure is a key determinant of overall transport costs. TRL is investigating appraisal techniques which involve appropriate road access indicators.

For further information contact: Gary Taylor, IT Transport,
Tel: +44 (0) 1235 833753
DFID Project Reference R6239 “Rural Transport Research Programme: Sub-Saharan Africa”
Theme Objective: T3

Low-cost animal carts

A nimal traction is a well established technology in many countries but in others it has yet to realise its enormous potential for low cost transport. One of the main impediments to the greater use of animal carts remains the cost and difficulty of cart manufacture. The Development Technology Unit (DTU) at Warwick University has been working on cart design since 1990 and is now managing a DFID funded project in Kenya and Uganda (building on work performed in Nigeria in the early 1990s) aimed at improving animal cart design for manufacture.

The underlying themes of the DTU’s approach are accessibility and advanced simplicity using locally available materials, local craftsmen and without the need for special tooling (ie designs which are highly developed to be very simple, quick to build and cost-effective). Using DTU designs, cart bodies can be built in less than one day and the complete cart in two days or less.

Quality of harnessing is crucial to the performance of animal carts. Oxen can be acceptably harnessed using yokes, but donkeys require something better so special sawback saddles (similar to pack saddles) are being investigated.

Different types of axle and bearings are also being tested as the currently used scrap automotive axles are not always reliable or cost effective.

Although current DTU designs are significantly cheaper and much easier to make than existing designs, there is still scope for further cost reduction. Scrap wheels, tyres and inner tubes can be extremely expensive overseas (sometimes approaching half the cost of new components in industrialised countries), so wheel and tyre alternatives are being investigated as part of this project.

For further information contact: Dr Colin Oram, Development Technology Unit, University of Warwick.
Tel: +44 (0) 1203 523135
DFID Project Reference R6475 “Low cost animal cart technology”
Theme Objective: T3
Promoting local materials for road construction

**Natural gravels are an abundant source of road building materials but do not always meet the quality requirements for roadbases and are frequently rejected in favour of expensive alternatives such as crushed stone.**

However, these alternatives are often not locally available and the transportation of large quantities in heavy vehicles is expensive and consequently large financial and environmental benefits can be achieved if local materials can be used with confidence.

TRL is currently undertaking four projects under the DFID funded TDR programme to promote an understanding of the engineering properties of local materials so that they can be used effectively for road construction. Field studies are being conducted in countries of the Southern Africa Development Community (SADC). Collectively, the projects aim to increase awareness and confidence in the use of different materials to encourage their application.

**Unbound granular materials**

The successful use of low-grade materials largely depends upon the moisture conditions established in the road. The project involves advanced tri-axial laboratory testing at TRL in order to examine the behaviour of unbound granular materials under various moisture and stress regimes which replicate conditions under the road. Results from the studies should be applicable to other developing countries and also to Europe where the appropriate use of low-grade materials offers similar large benefits to the construction industry. In recognition of the wider significance of the subject, this project is co-funded by the UK Department of Transport.

**Natural gravels for road building**

By studying the regionally dominant material types, this project aims to extend the use of natural gravels in roads by defining new limits beyond current specifications. The use of low-grade natural gravels in developing countries is most beneficial to roads with low traffic volumes in regions of dry climate. The project is being undertaken throughout the SADC region of southern Africa where such conditions exist.

The studies are showing that consideration of the road structure as a whole is needed. In order to predict the performance of these low grade materials, many other parameters must be taken into consideration including the road shoulder width and whether it is sealed, local topography and drainage pattern.

**Environment and road building**

Many rural communities may suffer from the adverse effects of new road construction. This project addresses the problems associated with borrow-pits that remain along the road-line after construction materials have been extracted. Surveys in Zimbabwe and Malawi have shown that over 80% of borrow-pits are not reinstated correctly, which can leave agricultural land barren and hazardous. Working with the local construction industry and soil scientists, TRL is examining the processes required to reinstate the land in a cost effective manner that is beneficial to the roadside communities.

**Materials database for the SADC region**

The appropriate use of natural materials for road building relies on knowledge of the geology, distribution and engineering properties of the most common regional material types. The project aims to collate this information, including the application and subsequent performance of the materials within road structures, into a materials database for the SADC region. The study is a development of a geotechnical databank established by the Zimbabwe Department of State Roads. The databank greatly improves engineers access to information and has led to a substantial reduction in the intensity of field investigations needed before construction.

For further information contact Mick O’Connell, TRL. Email: moconnell@trl.co.uk or Tony Greening, TRL. Email: inet@trl.uz.zw

DFID Project References: R5605 (Unbound granular materials); R6020 (Natural gravels for road building); R6021 (Environment and road building) R6022 (Materials database for the SADC region).

**Theme Objective G4**

**Low grade lateritic gravel roadbase in Zimbabwe**

1997 PIARC British National Congress : DFID Study Tour

A study tour on development issues has been organised by DFID in association with the 1997 British National Congress. The study tour will take place in the week before the Congress and will include

- a two-day seminar/workshop on “The needs of Developing Country Transport Research Customers”, to be held at TRL, Crowthorne.

- a two day course at the University of Birmingham on the new HDM-4 model (strategic uses). For decision makers in developing countries, countries in transition and donor countries and aimed at senior staff considering whether to adopt HDM-4. (30 - 31 October 1997)

For further information contact Colin Goodwillie, PIARC British National Committee Tel: +44 (0)171 921 4349, Fax: +44 (0)171 921 4505
Travel behaviour in urban households

Many cities of the developing world have rapid population growth coupled with limited finances available for investment in urban infrastructure which has led to severe transport and mobility constraints. These problems are exacerbated by locating the low income community on city fringes where land is available but employment opportunities are scarce thereby generating substantial demand for low cost travel to workplaces and other amenities. Low income housing has frequently developed in such areas which are inadequately served by public transport services. Inevitably, this has an effect on the quality of life of residents in terms of accessibility to employment and amenities essential for sustainable economic and social development.

In 1994 British Aid funded the TRL to undertake a three year research programme to investigate the influence of household income and gender on travel behaviour. The results from India and Ghana suggest that women are more dependant than men on public transport services and walking and hence, are most affected by inadequate public transport provision. Even when personal vehicles are available in a household, cultural traditions appear to constrain the use of such vehicles by women though attitudes are changing.

The results of the study provide policy makers with an improved understanding of urban travel behaviour and constraints and will enable the formulation of better transport developmental projects in the future. This should lead to improved mobility and accessibility to the entire transport network for low income households and particularly women in the developing world.

For further information contact Brian Hills, TRL, email: bhills@trl.co.uk

Spanish version of TRL safety manual launched in Chile

The Chilean National Commission for Road Safety held the launch of the Spanish version of the TRL guide “Towards safer roads in developing countries” in Santiago last November. The guide was first published by the TRL in 1991 in conjunction with Ross Silcock funded under the British Aid programme. The translation and production of the Spanish version was funded by the Chilean National Commission for Road Safety.

The guide draws together over 20 years of experience and practice in developing countries by UK researchers and consultants. The manual has proved to be highly successful and over 7000 copies of the English version have been distributed to more than 130 countries. It has been adopted by the World Bank as a road safety reference for highway projects.

The Spanish version is not yet widely available having been published for specific use in Chile.

For further information contact Brian Hills, TRL, email: bhills@trl.co.uk

Ross Silcock wins major award for road safety work

Specialist road safety consultants Ross Silcock, who have recently completed with TRL a study funded under the British Aid programme into the socio-economic costs of accidents in developing countries and who worked closely with TRL to produce the highly acclaimed manual “Towards safer roads in developing countries”, have been awarded one of the highest accolades in British consultancy, namely “CONSULTANCY FIRM OF THE YEAR (SMALL FIRMS) 1996”.

This prestigious award, presented annually by the British Consultancy Bureau was presented to Ross Silcock for the excellence of its road safety work in Fiji and for “outstanding contributions to the country worked in and to British export earnings”.

Ross Silcock, one of TRL’s closest collaborators in road safety projects, have provided advice on road safety in over 25 countries around the world.

For further information contact Dr Alan Ross, Ross Silcock Ltd, Tel: +44 (0) 191 261 8101 email: 101776.3126@compuserve.com

Rural Transport training programme

A training programme on Managing and Financing Rural Transport is being organised by the TRL in Washington DC, USA in December this year, supported by both the World Bank and the Department for International Development (DFID, formerly ODA). Aimed at senior officials from government ministries and road agencies, the programme is intended to disseminate relevant information on sustainable solutions to the management, planning and financing of rural infrastructure and transport services, taking environmental implications into account.

The aim is to encourage the sharing of experience between participants as well as between participants and speakers through discussions and plenary sessions. Presenters will include transport professionals and international experts.

The programme will cover both infrastructure and services and include financing and resource mobilisation, designated and undesignated roads, the off-road transport burden, institutions, planning and implementation, environmental issues and mitigation plans.

For further information contact Linda Parsley or Simon Ellis, Overseas Centre, TRL, Tel: +44 (0) 1344 770551/770552, E-mail: lparsley@trl.co.uk
Current TDR Projects
Sponsored by DFID

THEME T1

- Accident recording, investigation and evaluation systems (R6885) TRL: Mr C J Baguley
  UK support and in country training provided for existing and new users of MAAP for sustainability in the least advanced countries. Training to develop accident investigation skills. Under reporting to be investigated using hospital records.
- Safety and road worthiness: assessing urban and rural public transport (R6888) TRL: Mr T C Pearce
  Assess the scale of the problem resulting from accidents and the effect of varying maintenance practices on bus fleets’ roadworthiness. Role of vehicle usage and design in bus accidents will be studied and recommendations developed for safer travel.
- Road safety education in developing country schools and communities (R6890) TRL: Mr I Sayer
  Development of road safety education materials and teaching methods that bring about improved road safety knowledge and attitudes by young road users in schools and community groups in developing countries.
- Cost and safety design of rural roads in developing countries (R6891) TRL: Mr C J Baguley
  Aspects of rural highway design identified that optimise costs and safety; detailed design manual drafted, lookup tables relevant to models such as HDM generated. Manual published and in country seminars conducted.
- Road safety development and evaluation of engineering countermeasures (R5614) TRL: Mr C J Baguley
- Accident data collection and analysis: sub-Saharan Africa (R6028) TRL: Mr R Correll
- Road safety development and evaluation of educational programmes (R6029) TRL: Mr I A Sayer
- Pedestrian accidents/vulnerability in developing countries (R6036) WS Atkins International: Dr F Kamali

THEME T2

- Low cost structures for rural roads: A field manual (R6851) Loughborough University: Mr D W J Miles
  Preparation of a practical field manual to encourage local engineers and contractors to utilise local labour, skills and materials more effectively in the construction of low cost and readily maintainable structures on rural and urban roads.
- Improved vehicle maintenance cost relationships (R6885) TRL: Mr L J Hine
  Fundamentally new vehicle maintenance cost relationships will be developed for use in the road investment model HDM4. These relationships will enhance the applicability and transfer of the model for world wide use.
- Promoting the use of lower cost marginal materials (R6887) TRL: Mr M J O’Connell
  Guidelines promoting the use of low cost marginal materials in the road industry. Using existing research where possible these will identify suitable applications for the use of such materials and warn of the associated risks.
- Transferring road maintenance into the private sector (R6889) TRL: Mr C C Parkman
  Critical assessment of the extent and nature of the adoption of contract road maintenance procedures and the factors governing the successful transfer of road maintenance into the private sector, to inform agency policy.
- Secondary compaction of bituminous materials (R6892) TRL: Mr H R Smith
  Develop a method of assessing the susceptibility of bituminous mixes to secondary compaction under heavy traffic for use in the design of road surfacings which are more durable and resistant to plastic deformation.
- Benefits of stabilised subgrade and earthwork maintenance (R6953) TRL: Mr W Heath
  Assess the benefit of applying maintenance programmes based on a number of identified key factors that at present contribute to the poor maintenance of mountainous roads. Full scale trials will be monitored using TRL’s ECAT techniques. Guidelines will be produced.
- Road planning, funding and funds allocation (R6894) TRL: Mr L J Hine
  Identify the main constraints preventing the efficient planning and funding of the road network, in particular procedural conflicts and institutional limitations. Innovative funding and management methods eg. DBFO and BOT will be explored.
- Management guidelines and performance models for unpaved roads (R6895) TRL: Mr T Toole
  Provide management guidelines and performance models for unpaved roads and motorable tracks for use by senior engineers and planners and new road performance models for incorporation into HDM4 aimed at improving access quality on rural roads and increased use of local resources.
- Innovative compaction technology for low volume roads (R6896) TRL: Mr P A K Greening
  Development of methods to improve compaction and performance of materials for low-volume, low-cost and labour based sealed roads.
- Dense bituminous surfacing for developing countries: A guide (R6897) TRL: Mr J L Hine
  Produce a guide describing the design and construction of dense bituminous surfacings in tropical climates. It will be targeted at engineers in the developing world and enable them to supervise the construction of improved surfacings.
- Guidelines on the selection and use of road construction materials (R6898) TRL: Mr M J O’Connell
  Production and dissemination of a new Overseas Road Note containing concise but comprehensive advice on the sampling and testing of granular materials and soils for the construction and rehabilitation of roads in the developing world.
- Promoting the use of volcanic ash, a natural pozzolan (R6841) TRL: Mr M J O’Connell
  Use of volcanic ash for the construction of major civil engineering works to alleviate the damage caused by recent volcanic eruptions, develop road and building technology and promote commercial ventures.
- Appropriate and efficient maintenance of rural feeder roads (R6892) Roughton International: Mr M J Carr
  An assessment and maintenance method will be developed for gravel rural feeder roads using simple, affordable, yet novel techniques. The result will promote appropriate technology and practice so maximising efficiency.
- Transport planning road investment modelling (R5591) TRL: Mr L J Hine
- Unpaved roads (R5599) TRL: Mr T Toole
- PC concrete pavements (R5602) TRL: Mr J Parr
- Rehabilitation design (R5610) TRL: Mr H R Smith
- Bituminous materials - their improvement and use for road building (R5612) TRL: Mr H R Smith
- Rehabilitation of roads with bituminous surfacings (R6023) TRL: Mr C H Jones
- Environmental impact of road construction (R6026) TRL: Mr C J Lawrence
  The design of stabilised sub-bases for very heavy traffic (R6027) TRL: Mr M J O’Connell
  Management of appropriate road technology (R6028) Loughborough University: Mr D W J Miles
  International study - highway development and management tools (R6472) University of Birmingham: Dr H Kerali
  Dr Kerali
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THEME T3

- Gender issues in rural transport (R6854) IFRTD: Ms P Fernando
  Through analysis of the impact of a range of interventions aims at developing practical guidelines for the incorporation of gender concerns into the planning, design and implementation of rural transport interventions.
- Rural transport services in sub-Saharan Africa enhancing the role of small and medium enterprises (R6882) Cranfield University: Dr C P Crossley
  Enhance the contribution made by informal small industrial enterprises to the efficient provision of rural transport services that are vital to the economies of developing countries by identifying and reducing some key restraints.
- Availability of rural transport services (R6884) TRL: Mr S D Ellis
  Identify factors that inhibit the supply of rural transport services. Also investigate the sensitivity of demand to changes in the price of transport. The findings will enhance the capability of planners to improve the provision of rural transport services.
- Barriers to the availability of cost-effective transport (R6886) TRL: Mr G Gardner
  Provide a methodology for an Urban Transport Audit to rapidly assess a city’s ability to introduce cost-effective transport systems. Determine where blockages are occurring that prevent the use of low cost appropriate traffic and safety measures.
- Low-cost motorised ambulance service for rural communities (R6895) IT Transport: Mr I Barwell
  To evaluate the viability of motorcycle-based ambulance services for rural communities and if found viable, to develop guidelines for setting up and operating the services.
- Rural transport research programmes in sub-Saharan Africa (R6239) IT Transport: Mr G A Taylor
  Low cost animal cart technology (R6475) University of Warwick: Dr C E Oram
  Community participation in road maintenance (R6476) IT Transport: Mr G A Taylor
- The establishment of small scale road transport contractors (R6477) Intech Associates: Mr W William

THEME T4

- Increasing the efficiency of the road freight transport sector (R6888) FTRC Education and Research Services: Ms A Fine
  To improve the Egyptian road freight sector. Identification of management best practices will be grouped into policy programmes with the aim of increasing the efficiency of this sector.
- Road network management (R6024) TRL: Mr T Toole
- Reducing the cost of freight in Africa (R6240) Mott MacDonald: Mr R Mansfield / M Mallworth

THEME E3

- Development of environmental impacts and energy balance models for HDM4 (R6486) University of Birmingham: Dr H Kerali

THEME G4

- Unbound granular materials (R5605) TRL: Mr M J O’Connell
- Natural gravels for road building (R6029) TRL: Mr P A K Greening
- Materials database for the SADC region of Southern Africa (R6022) TRL: Mr P A K Greening
- Manual of concrete design using local materials (R6235) Guildford & Partners: Dr G P Tilly

THEME U2

- Urban mass transit (R5596) TRL: Mr G Gardner
- Traffic database and audit (R6017) TRL: Mr P Fournace
New TRL Overseas Road Notes

ORN 14 - Hydrological design manual for slope stability in the tropics.

Most slope failures in tropical soils are triggered by local rainfall leading to changes in the soil-water conditions. The objective of this manual is to provide advice on how to determine if these conditions are critical and if so how to measure them. The predictions of stability are based on a combined slope hydrology/stability model developed at Bristol University through British Aid funded research. The results have been tested under field conditions and integrated with existing practice.

The main part of the manual consists of a series of ‘Instructions’, which are procedures to expand site investigations. These introduce new slope stability design charts, the use of the dimensionless resistance envelope and the measurement of permeability and suction together with factors affecting the use of piezometers. The manual concludes with a section on data collection.

DFID Project Reference R506: “Terrain surveys and site investigation” Theme Objective G5

ORN 16 - Principles of low cost road engineering in mountainous regions, with special reference to the Nepal Himalaya

The results of more than twenty years of research and practical experience of road construction and maintenance in mountainous regions are brought together in this publication. TRL has collaborated with consultants Scott Wilson Kirkpatrick to combine experience in overcoming the special engineering problems presented by an unstable, ever-changing mountainous environment, such as Nepal. ‘Low cost’ design philosophy implies some relaxation of road standard and normal design procedures. Occasional damage to the road must be expected, so the desire for a high road standard needs to be balanced against the costs of reinstatement. Design must be related to the landscape; aspects such as identifying the most stable route (relatively speaking!) and preserving natural drainage systems are vital.

ORN 16 concentrates on the principles behind design decisions and procedures demanded by the rigours of a mountainous environment. Emphasis is placed upon the risks associated with inappropriate design or poor construction practice, and upon techniques or procedures that are effective and safe. Nepal experiences natural disasters regularly and is a good proving ground for the techniques described. However, the principles are applicable in any unstable landscape.

DFID Project Reference R6026 “Environmental impact of road construction” Theme Objective T2

For further information about these publications contact: Cliff Lawrence, Overseas Centre, TRL, Email: CliffL@o.trl.co.uk

Book Reviews

Bio-engineering for effective road maintenance in the Caribbean (LR 11). by J Clark and J Hellin. Published by Natural Resources Institute (NRI), 1996

Produced by NRI and funded under the British Aid programme the purpose of this handbook is to initiate and stimulate the development of routine bio-engineering activities which can help engineers to improve the effectiveness of their work in the road sector. In addition, many of the principles set out in this manual can be applied to other sectors where exposed soils and slopes need to be protected. This concise handbook focuses on eleven plant species found in the Caribbean region. There are four main sections. The first describes the species and their bio-engineering uses. The second shows how the plants can be incorporated into seven bio-engineering techniques for protecting slopes and gullies. The third describes propagation and nursery care and the fourth outlines case studies on Caribbean road projects where bio-engineering has been used. The layout and instructions in the handbook are very clear and well-presented.

Reviewed by Cliff Lawrence, TRL

Financing Road Maintenance: a study of organisational and financial conditions for securing road assets in developing countries by Dr G Metschies. Published by GTZ, 1996.

Concentrating on the well reported road maintenance crisis of sub-Saharan Africa, Financing Road Maintenance presents ideas for policy makers on how best to secure and disburse road finance. Prepared by the German Agency for Technical Co-operation (GTZ), the report includes extensive case studies from West and Central Africa and also draws heavily on recent initiatives in road management by the World Bank. The report identifies the need for an effective organisational structure and promotes the use of an independent Roads Authority. It also suggests how finance should be secured and properly managed, describing how a Road Conservation Fund might be set up and funded, with particular focus on appropriate levels for fuel levies.

Reviewed by Chris Parkman, TRL

Health at the Crossroads - Transport Policy and Urban Health: Editors: T Fletcher & A J McMichael

Published by J Wiley & Sons, 1997

The title of the book was chosen to imply that the future direction of transport policy should be influenced by increasing health concerns and that a choice needs to be made about the levels of transport-related health problems that can be tolerated. Aimed at public health care professionals, health researchers, transport policy makers and members of local and national governments, it contains a summary of papers presented at the Fifth Annual Public Health Forum held in April 1995 at the London School of Hygiene and Tropical Medicine. There are four main sections: pollution and health, traffic and injury, wider public health, city case studies and transport policies.

The British Aid programme co-sponsored the forum and the Rt Hon. the Baroness Chalker of Wallasey, provides a foreword to the publication in which she identifies the key areas where transport policy impacts on urban health. This issue is one of the subject areas which will be kept under constant review by the Department’s, newly formed ‘Urban Development Focus Group’.

Reviewed by Geoff Jacobs, TRL
Recent publications

TRAV 259
ELLIS, S (1997). Key issues in rural transport in developing countries. TRL Report 259. (£10*) (TRL)

TRAV 263

PAPERS


PAPERS
TRAFL 285

For copies of the above publications, please contact the relevant organisation - indicated in brackets
* Limited numbers of TRL publications are free of charge to nationals from developing countries.

Contact addresses
The British Council (Oxford), 1 Beaumont Place, Oxford OX1 2LU. UK.
Fax: +44 (0)1865 573668/516590

 Cranfield University (Silsoe College), Silsoe, Bedfordshire MK45 4DT. UK. Fax: +44 (0)1525 862001

 Dfid, 94 Victoria Street, London W1E 5JL, UK.
 Fax: +44 (0)171 943 0072

 Development Technology Unit (DTU), Engineering Dept, University of Warwick, Coventry CV4 7AL, UK. Fax: +44 (0)1203 418922

 GTZ, Energy and Transport Division, PO Box 5180, D-65726 Eschborn, Germany. Fax: +49 6196 79 1113

 IFRIT New Premier House, 150 Southampton Row, London WC1B 5AL, UK. Fax: +44 (0)171 278 6880

 Institute of Development Engineering, Loughborough University, Leicestershire LE11 3TJ, UK. Fax: +44 (0)1509 211079

 International Labour Office (ILO), CH-1211 Geneva 22, Switzerland or Vincent House, Vincent Square, London SW1P 2NB, UK. Fax: +44 (0)171 233 9385

 IT Publications Ltd, 103-105 Southampton Row, London WC1B 4HH, UK. Fax: +44 (0)171 436 2013

 IT Transport Ltd, The Old Power Station, Ardington, Nr. Wantage, Berkshire RG45 6AU, UK.
 Fax: +44 (0)1235 433581/516590

 Natural Resources Institute (NRI), Central Avenue, Chatham Maritime, Kent ME4 4TB, UK. Tel: +44 (0)1634 880868/516590

 Natural Resources Institute (NRI), Central Avenue, Chatham Maritime, Kent ME4 4TB, UK. Tel: +44 (0)1634 880868/516590

 Ross Silcock Ltd, Old Brewery Court, 156 Sandyford Road, Newcastle upon Tyne NE21 1XG, UK. Fax: +44 (0)191 261 8340

 Transport Research Laboratory, Old Wokingham Road, Crowthorne, Berkshire RG45 6AU, UK. Fax: +44 (0)118 770 7179

 J Wiley and Sons Ltd, Baffins Lane, Chichester, West Sussex PO19 1UD, UK. Tel: +44 (0)1243 779777

 Newsletter Editors

Transport
Linda Parsley, Overseas Centre, Transport Research Laboratory, Old Wokingham Road, Crowthorne, Berks RG45 6AU, UK.
Tel: +44 (0)1134 770551 Fax: +44 (0)1344 770719
Email: harsley@trl.co.uk

Earthworks
Dr John Bennett, British Geological Survey, Keyworth, Nottingham NG12 5GK, UK.
Tel: +44 (0)115 936 3465 Fax: +44 (0)115 936 3474
Email: j.bennett@bgs.ac.uk

Energy Efficiency
Dr Andrew Gilchrist, ETSU, Harwell, Oxford OX11 0RA, UK.
Tel: +44 (0)1235 433589 Fax: +44 (0)1235 433727
Email: andy.gilchrist@aceat.co.uk

Urbanisation
Dr Andrew Cotton, Water, Engineering and Development Centre, Loughborough University, Leicestershire LE11 3TJ, UK.
Tel: +44 (0)1509 222885 Fax: +44 (0)1509 211079
Email: wedc@lut.ac.uk

Water
Geoff Pearce, Overseas Development Unit, HR Wallingford, Howbery Park, Wallingford, Oxford OX10 8BA, UK.
Tel: +44 (0)1491 835381 Fax: +44 (0)1491 826352
Email: odunit@hrwallingford.co.uk