



ASIST

ADVISORY SUPPORT INFORMATION SERVICES AND TRAINING FOR LABOUR-BASED PRACTITIONERS

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Labour-based technology: The macro-economic dimension

By Gary Taylor, IT Transport, United Kingdom



Employment creation through labour-based roadworks

Most of the readers of this article will be familiar with the socio-economic benefits of using labour-based methods. Job creation for unskilled rural people in rural areas is the most obvious. Other benefits include savings in foreign exchange; injection of cash into the local economy; increasing skills in local people; and a better chance of future sustainability through a higher sense of local ownership, and through familiarising people with the necessary operations for road maintenance.

However, it is not sufficient to present decision-makers with a simple list of the advantages of labour-based methods over the alternatives. At some point a means of measurement of the comparative advantages is required. For this

reason the Government of Uganda, with support from the ILO, initiated a comparative study of labour-based and equipment-based techniques for roadworks.

The study used historical data about feeder road rehabilitation, spot improvement and maintenance costs over the mid to late 1990. Data was available for feeder road projects totalling over 1,700 kilometres in length. Some of these had been carried out by equipment-based methods and some by labour-based methods. Examination of the data permitted some broad conclusions to be drawn about average costs using the two different methods. However, the main purpose of the study was to use methods of comparison that went beyond pure financial costs to meas-

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Editorial

Investments are normally made to reap benefits later. Benefits may be quantified and qualified in economic and social terms. Sometimes these benefits may be positive and substantial, whilst in other cases it may be very difficult to quantify them at all. Indeed, investments may have a negative effect on the interest and the environment in which we find ourselves.

This bulletin shows examples of how the choice of investments and, in particular, the choice of technology may influence social and economic benefits accrued to potential stakeholders. A careful reading of the articles should provide some food for thought for those who are not convinced about the place of labour-based technology in infrastructure development and maintenance. It should also provide some new ideas and arguments for those who are already convinced about its prominence.

Appropriate planning and organisation of projects is being addressed at policy level in a number of programmes supported by ASIST, like the South Africa public works programmes. This is an area where ASIST's involvement is increasing. Whereas many integrated development projects were given a bad name in the past, we believe that the role of accessibility planning and reinforcement of benefits through careful selection and co-ordination of projects is the way to go for both rural and urban development programmes.

Through this bulletin, I am saying "see you soon" to our colleagues around the world as I am now leaving ASIST for a new job at ILO headquarters in Geneva. I wish you all the best and hope that you will continue your close liaison with ASIST, providing inputs for dissemination and transfer of knowledge to a larger audience. I also wish the new Programme Director Jane Tournée all the best in her new job. Surely, the team will keep you abreast with further developments and be available to support labour-based projects and programmes for some time to come!

Terje Tessem, ASIST Director

The work of ASIST

ASIST is a programme of advisory support, information services and training, within the EIIP programme of the ILO. The Employment-Intensive Investment Programme (EIIP) of the ILO is a large scale technical co-operation programme promoting the use of local resource based technologies in infrastructure works in developing countries, and strengthening their capacity to apply such technologies, while creating employment with fair working conditions.

ASIST currently comprises two regional support programmes in Africa and Asia working within the framework of the EIIP. Their objective is to increase the use of cost-effective labour-based methods with fair working conditions in Sub-Saharan Africa, Asia and the Pacific, and thereby promote employment and income generation in the rural and urban areas.

Advisory Support

ASIST provides comprehensive policy, planning and technical advice. ASIST advises on project and programme design, co-ordination, monitoring, and review of both urban and rural labour-based programmes, and Access and Rural Employment (ARE) programmes.

Information Services

ASIST actively gathers, synthesises and disseminates relevant published and unpublished information on and related to rural and urban labour-based technology and ARE. ASIST provides a Technical Enquiry Service to respond to specific requests for information. ASIST maintains a database of contact persons and institutions involved in the promotion and development of labour-based technology and ARE.

Training

ASIST provides support to national training institutions and universities in the development and provision of training in labour-based technology and rural accessibility planning. This involves support in the development of curricula, training programmes and material, as well as training techniques and methodology. ASIST also supports annual international training courses for engineers, senior technicians, contract supervisors and trainers, organised by the Ministry of Roads and Public Works (MoRPW), Kisii Training Centre, in Kenya.

ASIST Harare

Terje Tessem: Programme Director
Jane Tournée: Senior Technical Adviser
Fatemeh Ali-Nejadfard: Senior Technical Adviser, ARE
Gamelihle Sibanda: Technical Adviser
Tomas Stenström: Technical Adviser
Jan Sakko: Technical Adviser
Ida Tsitsi Chimedza: Information Officer
PO Box 210, Harare, Zimbabwe
Tel: +263-4-748344/7; Fax: +263-4-759427
Email: asist@ilo.org

ASIST Nairobi

David Mason: Senior Technical Adviser
Wilma van Esch: Urban Technical Adviser
Maria Winsvold: Technical Adviser
Angela Kabiru-Kangethe: Information Coordinator
Annabel Chite: Information Officer
Anne Obara: Administrative Officer
PO Box 60598, Nairobi, Kenya
Tel: +254-2-572555/572580
Fax: +254-2-566234
Email: iloasist@iloasist.or.ke

ASIST-Asia Pacific

Mike Shone: Chief Technical Adviser
Paul Munters: Technical Adviser
PO Box 2-349, Rajdamern, Bangkok 10200, Thailand
Tel: +66-2-288-2303; Fax: +66-2-267-1735
Email: asist-ap@ilo.org
Website: <http://www.ilo.org/asist>

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Editorial team Annabel Chite, Angela Kabiru-Kangethe and David Mason.
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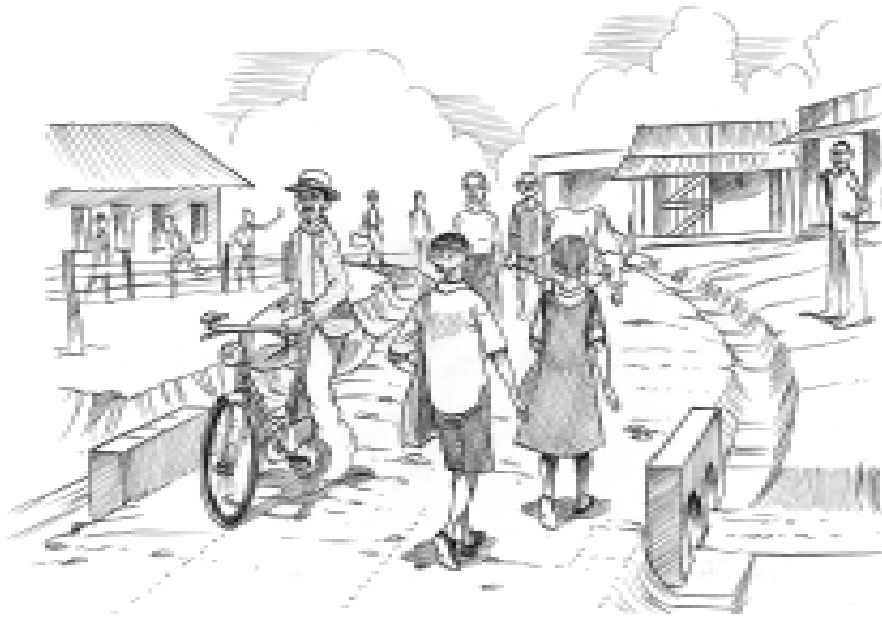
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'Realising benefits' using road committees

Experience from Western Uganda

By Jo Leyland, Community Participation Specialist, Kenya



Local community enjoying the benefits of an improved road

The Western Uganda Road Maintenance Capacity Building Project which is jointly funded by the British and Ugandan governments supports the Ministry of Works, Housing and Communications (MoWHC) in the rehabilitation and routine maintenance of selected gravel trunk roads in western Uganda. Unusually for a trunk road project, it has quite a substantial community participation component. Whilst the project does not expect local communities to freely provide labour or materials, it has developed approaches to involve local communities as important stakeholders in the trunk road network.

The main mechanism has been to establish road committees at sub-county level composed of the local leaders of villages and parishes along the road plus women, youth and other sub-county representatives. The MoWHC and project staff conduct one-day workshops with the committees to inform and sensitise them about the impending rehabilitation

contracts and issues related to road maintenance such as the importance of drainage, road reserves, access to borrow pits, road safety etc. Site visits hosted by the MoWHC are then conducted along the roads with representatives from the road committees and the contractor, both at the start of the contract and during the defect liability period following completion of the works. These have provided a very useful opportunity to identify problems, make minor amendments to the works to improve the design or to address local needs (such as including a parking bay for a local roadside market), make the contractor's work easier by establishing good local relations, and have the MoWHC seen to be more responsive and accountable to local residents who are government taxpayers.

By assessing the significant positive economic and social changes and being able to attribute them to the road improvement, it helps to reinforce the importance of main-

taining the road in a good condition in order to retain those benefits. This encourages the local communities to play a more pro-active role in protecting the improved road and liaising with the MoWHC. Another aspect analysed during the impact workshops is who benefits most and who least from the road improvement. Those with poor access to the road and being more remote from it are far less likely to benefit from the increased trading options or improved access to facilities such as health units. Whilst the districts are responsible for the maintenance of the district (feeder) roads, sub-counties are responsible for their own community (access) roads. The amount of investment in the rehabilitation of the stretch of the trunk road passing through their sub-county is likely to be of the order of the sub-county's annual tax revenue and is unlikely to be repeated for some time. With this investment and the potential benefits to be realised, it can spur local communities themselves to improve their access to the main road. During the initial road committee workshops, the passability of the roads accessing the trunk road is identified using a simple ranking system. It helps to highlight the access constraints faced by sub-county residents. For example, 57 roads were identified within two sub-counties in Kabarole and Masindi districts and of those, 37% were impassable and 28% were passable to bicycle or motorcycle only. Most of the remainder were passable by 2WD vehicles in the dry season only.

Not only is it important for the local communities to analyse the impact of the road improvement for themselves, it is also much quicker for the project that is tasked with monitoring and evaluating activities to obtain a good picture of the changes that have taken place. These changes may be in vehicle ownership and operation patterns, business activities, agricultural production, use of social services etc. This is done both by distributing a questionnaire to each sub-county prior to the workshop, and from the group discussion sessions and presentations. The 7-day traffic counts carried out by the project prior to and after each road improvement also indicate quantitative changes in local economic activity and travel.

During the first implementation phase of the project, rehabilitation contracts were equipment based but

it was realised that despite good intentions, there was very limited scope for employing significant numbers of local people in the works and even less chance of employing women. Thus, in the second and final implementation phase that started last year, a number of roads are going to be rehabilitated using labour-based methods and employing not less than 30% women as labourers. Then, as well as the benefits from the actual road improvement, local people will benefit from the cash injection into the local economy as a result of the increased employment opportunities available. The project is also looking at ways of optimising the technical skills that the local people acquire so that they can use them to improve their own road network. Again, the road committee approach is helping considerably in informing local people of what is being planned and in advertising the availability of work to women and men. For the first road being rehabilitated using labour-based methods in an area where women have not worked on the roads, a third of the applicants were women, which helps to make the recruitment process fairer. ■

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ure the wider social and economic benefits. As a first step, an economic cost comparison was carried out for which taxes were excluded and shadow prices were used for the main inputs – primarily for labour. This economic comparison gave a more realistic picture in terms of the relative costs to the economy of using the two methods. Table 1 shows the results of the comparison of the average financial and economic costs.

These results still do not fully take account of the multiplier effects of the different construction methods, whereby injections of cash into the local economy can stimulate economic development. Nor do they include for the relative effects on Gross Domestic Product, average household income, trade balance, government revenues and other macro-economic parameters. To take account of these factors the study used a simple macro-economic model based on that developed for similar studies in Madagascar and Rwanda.

The results of comparing the macro-economic impacts were both

Table 1: Financial and economic comparison of labour-based methods and equipment-based methods for feeder road rehabilitation in Uganda

interesting and, in some cases, surprising. They served to further strengthen the case for using more labour-based methods for construction in Uganda. Some of the key results were:

- For every job created in the feeder road programme by using labour-based methods, another 1.6 jobs were created in the wider economy due to so-called 'multiplier' effects
- Overall the use of labour-based methods created 3 times as many jobs as equipment-based methods
- Labour-based methods generated about two times more gross domestic product (GDP) through indirect effects than equipment-based methods
- Although the direct benefit of labour-based methods on public revenue (taxes, duties, etc.) is smaller than that of equipment-based methods, this is more than offset once indirect benefits are included. The overall effect is that labour-based methods result in a fiscal deficit of only 46% of that resulting from the use of equipment-based methods. Hence, higher net public revenues result from using labour-based methods compared to equipment-based methods
- There is a significant saving in foreign exchange (amounting to 62%) when using labour-based methods rather than equipment-based methods.

The implications for Uganda's macro-economic framework of these results are compelling. Labour-based methods generate more income to households, increase GDP faster and have a strong stimulus on local private investment.

In Uganda today the major cause of poverty is a lack of productive employment. Impressive growth in the economy has led to a fall in the overall percentage of those classified as poor. However, poverty among the unemployed has actually increased. The labour force is growing at a rate of at least 300,000 per year out of which only 100,000 are being absorbed into the wage economy. The

total number of unemployed and underemployed, currently about 3.8 million, is therefore growing steadily.

The study illustrated that the greater use of labour-based methods has a high potential for creating productive employment both directly and indirectly. Through a policy of greater use of labour-based methods, households would have increased incomes, which would enable them to better afford the basic requirements for their livelihood. Since greater use of labour-based methods also provides a stronger stimulus to the local economy, this would also lead to increased economic growth with an accompanying improvement in the national poverty indicators.

The results of this study raise some interesting questions. Labour-based methods were shown to have a financial cost advantage over equipment-based methods. This was, on average, of the order of 20%. However, this margin of advantage significantly understated the socio-economic benefits. An economic cost comparison revealed a cost advantage of 60% in favour of labour-based methods. The macro-economic model suggested even higher benefits in a whole range of macro-economic indicators. If the country is to exploit these potential benefits, a significant shift to the use of more labour-based methods for construction is indicated.

For now, it appears that many countries are prepared to rely on 'market forces' to settle the balance between the use of labour-based and equipment-based methods. But this study would suggest that this is an inadequate policy. A financial cost advantage of around 20% is probably insufficient to persuade entrepreneurs to risk a greater use of labour-based methods. Strong government policies together with a reform of the regulatory framework are going to be needed if countries are going to significantly tap the potential socio-economic benefits of more labour-based methods.

The case of Uganda is probably similar in many respects to other sub-Saharan African countries. ■

Counting the costs of developing Kampala's wetlands

By Lucy Emerton, IUCN – The World Conservation Union, Kenya

All too often environmental issues are ignored when cities are planned and built. Yet the state of the environment is not just a biological or ecological concern – when developments encroach on natural ecosystems or destroy environmental resources, they almost always give rise to immense social and economic costs. Not only do these costs often accrue to the poorest and most vulnerable sectors of the population, but they can also undermine the very aims of urban development itself – the better provision of services, the generation of income and employment, and the earning of government revenues. Below we ask the questions: just what are the economic costs of omitting environmental concerns from urban planning and development? Are they costs which either governments or urban populations are willing, or able, to bear over the long term?

One of the places where urban pressure on the environment is most acute is in Kampala District, Uganda. Over the last decade Uganda has entered a period of intense economic growth, infrastructural rehabilitation and urban development. Today nearly half of the country's urban dwellers live in Kampala, where the population is estimated to be increasing at an annual rate of nearly 5%, almost double the national average. To cope with this rapidly rising population, settlements are expanding, construction is taking place and urban infrastructure is being improved throughout the city.

Many of these developments have involved draining and reclaiming wetlands. Almost one sixth of Kampala District, or 31 km², is covered by wetlands ('wetlands' include permanent swamps and water bodies, as well as seasonally flooded areas),

including some of the parts of the city that have been zoned as centres of development. These wetlands are, without exception, facing a serious threat of total destruction. It is estimated that about three-quarters have been affected significantly by human activity and about 14% are seriously degraded. By far the greatest threat to wetlands is their reclamation for industrial and housing development.

One wetland area in particular has been severely encroached upon by settlement and industry. Nakivubo is one of the largest wetlands in Kampala, covering almost 6 km². It stretches from the central industrial district and passes through dense residential and commercial areas, before entering Lake Victoria at Murchison Bay. The areas around Nakivubo, including the wetland itself, are regarded as prime sites for urban development due to their proximity to the city centre and industrial district. This is as a result of land shortage in other areas, and because land prices are still relatively cheap as compared to other parts of the city.

There is a danger that Nakivubo may soon be modified and converted completely. Until recently, this has not been seen as a major problem by urban planners and civil engineers. Wetlands are generally seen as having little value, especially in the face of pressing needs for land for construction, and in comparison to the large and immediate profits these developments yield. Slowly, this perception is changing. The National Wetlands Programme of the Ministry of Water, Lands and Environment — the national government agency mandated with wetlands management in Uganda — has however recently started to work closely with city planners in order to assess the economic and social impacts of wetlands conversion and degradation. For one of the first times in Eastern Africa, attempts have been made to assess the economic value of maintaining wetlands in a well-functioning state, and to quantify the economic costs associated with their degradation and loss. The resulting information is beginning to give a more complete picture of the economic desirability — and long-term viability — of converting and modifying Nakivubo. It is becoming clear that, contrary to the dominant development imperative in Kampala, residential and industrial develop-

ment in wetlands does not necessarily make good economic sense, and cannot be based only on consideration of immediate financial gain. These expectations of private profits have also to be balanced against the broader social and economic costs that arise from wetland degradation.

Socio-economic values

One of the most important values associated with Nakivubo is the role that it plays in assuring urban water quality in Kampala. Both the outflow of the only sewage treatment plant in the city, at Bugolobi, and — far more importantly, because over 90% of Kampala's population have no access to a piped sewage supply — the main drainage channel for the city, enter the top end of the wetland. Nakivubo functions as a buffer through which most of the city's industrial and urban wastewater passes before entering Murchison Bay. These wastewaters equate to the raw sewage from nearly half a million households (or half of the city's population). Close by, the domestic effluents of approximately 8,000 households who live in low cost settlements around the wetland and the largely untreated wastes of nearly a third of the enterprises in the city's industrial district are also discharged directly into Nakivubo.

Nakivubo physically, chemically and biologically removes nutrients and pollution from these wastewaters. Wetland plants such as papyrus, reeds and grasses remove phosphorus and nitrogen. Suspended solids, pollutants and pathogenic organisms accumulate and decompose in the wetland's bottom sediments. Effluents are diluted through density currents caused by the difference in temperatures between the wetland and the water in Murchison Bay. It is estimated that Nakivubo currently processes almost half the nitrogen and a quarter of the phosphorus which enters it; is effective in removing bacteria and microbes; and has the potential, if properly managed, to improve the quality of water entering Murchison Bay still further. These functions are extremely important — the purified water flowing out of the wetland enters Murchison Bay only about 3 kilometres from the intake to Gaba Water Works, which supplies all of the city's piped water. The wetland ensures that a substantial proportion of pollutants have been

removed from the water which enters this intake.

Another set of vital benefits are provided by the natural resources found in Nakivubo. About a third of the wetland — mainly in its northern or upper part — is used by up to 500 farmers for cultivating yams, sugarcane and other crops. The water, sediments and fertile soils retained in the wetland enable this cultivation. Several hundred people are also involved in harvesting wetland resources, such as papyrus, grasses, reeds and clay. In total, nearly a tenth of the residents of the low cost settlements which surround Nakivubo engage in wetland-based resource utilisation activities. Many of these people lack access to other employment opportunities, or engage in only occasional and low-paid casual work. The wetland provides a significant supplement to local earnings, and forms the sole source of cash income for many of the poorest households.

Economic costs

All of these economic benefits — and by implication the economic costs associated with their loss — must be balanced against the potential profits accruing from wetland conversion and development. Nakivubo wetland saves the government of Uganda a considerable sum of money each year, and makes a substantial contribution to the local economy. Even deducting the costs of managing the wetland's waste treatment functions better so as to maximise its water purification potential (some US\$ 250,000 a year), Nakivubo provides a much cheaper way of dealing with Kampala's wastewater than other, man-made, options. The infrastructure required to achieve a similar level of wastewater treatment would incur costs of over US\$ 1 million a year in terms of extending sewage treatment facilities at Bugolobi, or nearly US\$ 2 million a year in improving water treatment facilities at Gaba. As well as being cheaper, wetlands' natural ability to purify wastes is far simpler than artificial waste treatment and water purification facilities because it is based primarily on the use of human labour and on the use of simple earth channels to spread wastewater across the wetland. Wetland farming and resource utilisation also have a substantial economic value — about US\$ 150,000 a year — and provide food and

income for nearly a thousand of the poorest families in Kampala.

The case of Nakivubo illustrates that environmental resources and natural ecosystems are not just places of scientific interest. They comprise a stock of natural capital which, if managed wisely, can generate substantial economic benefits. It is clear that, for sites such as Kampala, the issue is not whether processes of industrialisation and urbanisation should take place — of course they should, because they form a key part of most developing countries' future economic growth, and generate obvious social and economic benefits. Rather, it is becoming increasingly obvious that it is necessary to question the ways in which these developments are carried out, and especially how they are conceptualised, planned and implemented with environmental concerns in mind. While planners and decision-makers often remain unconvinced by purely biological or ecological arguments, the ability to demonstrate that environmental degradation gives rise to real monetary costs can provide a strong — and much needed — economic justification for taking environmental concerns into account in urban development.

Like Nakivubo, many other environmental resources and natural ecosystems have a high economic value. For example, as well as the obvious income and subsistence generated through the use of their component natural resources, forests provide vital water catchment protection services, and coastal vegetation and coral reefs play an important role in protecting shorelines and coastal settlements from storms and tidal surges. They often help to fill the gap between the level of basic goods and services that government is able to provide, and that which rapidly increasing urban populations require. Omitting environmental concerns from urban planning and development can give rise to untenable economic losses for some of the poorest sectors of the population. It can decrease social and economic welfare throughout cities' residents, and impose high economic costs on the public sector agencies that have the responsibility for providing basic services and assuring an acceptable standard of urban living. These groups are rarely in a position to bear such costs or expenditures. ■

Self-contracting

A new approach to effective road maintenance in Kenya?

By Andreas Beusch, Intech, Switzerland



Volunteer road rehabilitation

Over the last few decades the Kenyan authorities have tried to cope with the ever-increasing maintenance workload on the country's road network. Much has been tried out, starting from the taking-over of the colonial system, to engaging the advisory services of a battalion of consultants, to begging donors to repeatedly rehabilitate the same roads in turns, to actually trying out maintenance works using equipment or labour, or both together.

However, there seems to be some light on the horizon. No, it's not the new Roads Board that will be soon introduced and it's also not the new wind that blows through the civil service corridors after the appointment of the new Head of Civil Service. It's a new phenomenon from the ever creative and innovative private sector, which should draw particular interest from the ILO and donor agencies. Small groups of unemployed youths, usually young men with the ambition to become successful businessmen, organise themselves to enter the market of road maintenance.

In a first preparatory phase, critical road sections are identified that are within walking distance from where the community lives. These are usually sections on a bitumen road with countless potholes so close to each other that motorists have to slow down to walking speed. In a next step the traffic pattern is analysed to find out on which days and at which hours the traffic is likely to be high so that the road users can be effectively addressed to contribute in the funding of the urgent maintenance work. Available local resources in terms of hand tools and construction material are then made available. The fill material for the potholes is usually gathered from the existing shoulder, which was constructed using properly graded gravel. The young men then attempt to fill the potholes the best way they know how, and rely on passing motorists to give them handouts.

Numerous of these 'emerging local contractors' can be seen on heavily trafficked roads in rural as well as urban areas. A field analysis of these projects, carried out by the author of

this article, shows extraordinary success:

- It is a true self-help approach without any donor involvement, where the direct beneficiaries are the communities living next to the potholed road sections.
- The 'pothole taxpayers' are also direct beneficiaries of the new system since they are actually the ones who caused the potholes in the first place.
- It encourages young people to 'start their own business', and therefore creates employment.
- The risk of not having a constant and continuous flow of work for these emerging contractors, as is the case in so many donor-driven contractor development programmes, is minimised.
- A clever pothole management system, designed by these creative and dynamic contractors themselves, ensures that there are always some potholes to be filled, even if it means reinstating them back to their original size over night.
- The only risk these self-contracted small-scale contractors face could be the unlikely event that the government would wake up one day and actually start to maintain roads on its own. However, as recent history has shown, this risk is rather theoretical and hypothetical.

The conclusion that can be drawn from this very promising approach is encouraging. It is an exemplary development process driven by local communities based on their own capacity to grow, by utilising the locally available resources to the maximum. The approach is independent from the influence of politicians and donors. As long as there are potholes, and as long as there is traffic on these roads, the approach is truly sustainable. Could this, consequently, be an approach to be seriously considered by the ILO in their new struggle to mainstream and institutionalise the labour-based technology in all infrastructure sectors in a sustainable way? ■

Website update

As of March 2000 the ASIST website address will be:
<http://www.ilo.org/asist>

Illustration by Dan Amayo

An EIIP branch is created in ILO Geneva headquarters

Dear Friends of the ASIST bulletin,

As the world embarks on the 21st Century, all those seriously concerned with the future of our societies — and we know you are among them — would expect that the still unresolved, and indeed often worsened problems of poverty, underemployment, inequality and economic and socio-political instability and insecurity, would figure high on the agenda of both national governments and the international community.

The new Director General of the ILO, Mr. Juan Somavia, has refocused the Office's work for the decade to come around four policy priorities: (i) the promotion of standards and fundamental principles and rights at work; (ii) decent employment and income for men and women; (iii) social protection; and (iv) social dialogue.

The combined effect of these programme directions should contribute to reconciling economic and social development policies, and help member states to reach more substantive results, with regard to growth and equity, solidarity, strengthening of democratic processes, and peace.

Employment-based options make substantive contributions to the promotion of employment-intensive approaches in infrastructure policies.

The ILO has re-created an 'Employment-Intensive Investment Branch', the task of which will be to pursue and intensify the work aimed at influencing mainstream investment policy, and to participate in the rehabilitation and reconstruction efforts of the Office in various post-crisis situations. The Branch is located within the Recovery and Reconstruction Department of the ILO's Employment Sector, where it will closely cooperate with the 'InFocus Programme on Crisis Response and Reconstruction'.

Clearly, the policy objectives outlined above will remain the Branch's priorities for the years to

come. The ILO's specific value added in the infrastructure and construction sectors, indeed its comparative advantage as recognised by an increasing number of member states and workers' and employers' organisations, consists of the comprehensive policy tool which it has developed, on the basis of experience gained in demand-driven programmes, and which effectively links policy to action. In future this will consist of efforts to:

- explicitly link employment creation and poverty reduction, with a view to achieving greater social equity
- combine private sector development with social progress, through the application of relevant labour standards, with particular attention to the small and medium contractors and to the often casual labour force
- promote the principles of organisation and collective negotiation in both the formal and informal sectors, and,
- as the field programmes have demonstrated that they can make concrete advances on women's concerns and interests, ensure equal access to job opportunities and training, as well as equal pay for work of equal value, and develop criteria for the selection of productive and social infrastructure investment schemes which correspond to priority needs of women.

Much of this work will require close collaboration with workers' and employers' organisations, and the ministries of Labour and Employment, Planning and Local Government.

Difficult and sensitive issues at the upstream policy level will need to be tackled, such as the decision-making process of the Public Investment Programme (PIP), and the related need for consultations with the social partners and civil society at large; the tendering and bidding process and the contract system and procedures to ensure small labour-based contractors a fair access to public markets; the re-introduction of relevant labour standards into

contract documentation; the decentralisation of payment systems etc.

While the labour-based choice of technology is key to employment-intensive investment policy, the demonstration that it can be, in many programme areas, both technically appropriate and economically cost-effective, has already been made in many countries. The issue now is to apply labour-based technology options at a large enough scale to have a structural impact.

Capacity-building will, therefore, have to remain a major component of our work, both for the private sector, labour-based contractors, engineering consultants, workers, the associative sector, community-based and other grass roots organisations, and the public sector — engineers, planners, specialists of contracting and labour-related issues.

Finally, the knowledge base of the employment-intensive approach has to be expanded at two levels: first, through comparative studies on employment-based versus equipment-based investment policies — the macro-economic potential and advantages must be documented and demonstrated at the country level; and second, the impact on poverty must be more extensively measured and monitored.

This is a huge agenda for all of us, but I am convinced that with the commitment and energy of all those who have been involved during the last year, in the promotion of these policy principles, concrete progress in the employment and social fields is in our reach

May I take this opportunity to wish you, both the readers of the Bulletin and its publishers, a good start in this very special New Year 2000!

Jean Majeres
Chief, Employment-Intensive
Investment Branch
(EMP/INVEST) ILO Geneva

Rural Access Problems

What are they and how can these problems be addressed?

By Fatemeh Ali-Nejadfard, ASIST, Harare and Geoff Edmonds, IT Transport, United Kingdom

Several studies carried out in Africa and Asia show that people move around in rural areas for a variety of reasons that range from subsistence to socio-economic needs. The largest transport burden on households often takes place within the village, and is mostly required for the transport of water and firewood. These are often head and hand carried by women. Footpaths and footbridges are the transport infrastructure often used by rural households, mostly on foot, with the occasional use of animal drawn carts and bicycles for the economically more fortunate ones. Availability of transport and transport services conditions the movement of goods into and out of communities. When

different services/facilities. Accessibility is thus, defined in terms of provision of access and the ease (expressed in spent time, effort and cost) with which a need can be satisfied.

What are the linkages between poor access and rural poverty?

Almost a third of people in developing countries live in poverty; and their poverty is reflected in some basic indicators of lack of access to basic services. World Bank studies have shown a clear association between poor access to basic



facilities for basic services are difficult to reach, a lot of time and effort are spent to get them, which reduces the time available for other productive and social activities. Consequently, the household experiences a loss of productivity at critical times in the agricultural calendar and in other economic sectors. Lack of access therefore not only results in isolation, but becomes a real constraint to productive activities and contributes to factors that cause poverty.

How 'Access' is defined

The heart of the problem is 'accessibility'. This term encompasses both 'mobility' of people and 'locations' of

services and per capita income. Poor access is one of the characteristics of poverty and it has its effects at the most basic level of living. Lack of access to basic and social services, employment, technology, land, information, credit, etc. contributes to factors such as poor health, low skill, poor education, low investment and limited opportunities; leading to low productivity and income, which in turn perpetuates the vicious circle of poverty and hinders economic development.

Rural Accessibility Planning

An appropriate tool to address access problems

To improve rural access effectively, an appropriate (simple and relatively cheap) planning tool has been evolved, with ILO technical assistance, through pilot projects in Asia and Africa. It involves communities and local organisations to identify their access problems and propose solutions for improvement of their access to services and facilities. The local capacity in target countries has been strengthened to use this planning tool in order to address rural access problems more effectively and efficiently.

Rural Accessibility Planning (AP) focuses on the household, and measures its access needs in terms of the time

target areas; both regarding the mobility of the population and the location of services and facilities. The local communities, organisations (government and NGOs) and individuals are involved in this process in terms of providing the needed information. Local enumerators are trained to carry out the needed survey and to process the data. Data comprises secondary data (population, agriculture outputs, etc.) and primary data. At the household level, primary data is collected on time taken and the manner in which households obtain access to services and facilities. The collected data is processed and analysed, which results in a demand-oriented access or transport needs in target areas.



spent to get access. Because of poor access a lot of time is spent by rural households to transport themselves and their goods in order to meet their needs.

The underlying principal of accessibility planning is to reduce the time spent on achieving access, and, hence have more time available for other social and economic activities.

Steps 1 and 2: Data collection and processing

The first step of Accessibility Planning is to carry out a situation analysis that identifies the access problems in

Step 3: Preparation of accessibility profiles, indicators and maps

Access profiles of target areas cover a set of basic information on both locations of services and facilities and the difficulties that people have in gaining access to them. For each sector, accessibility indicators (AI) are prepared. The indicators are calculated by considering the number of households (N) in a target area, the average time spent to reach each facility/service (T), the frequency of travel to each facility in a given period (F) and an acceptable/target

Rural Accessibility Planning

travel time (T_m) to get access in a sector. The $AI = N_x(T - T_m) \times F$ formula is used to calculate the Accessibility Indicator. In addition, based on the gathered information, accessibility maps are prepared in order to have a better visual presentation of access profiles in target areas and to see alternative solutions to access problems.

Step 4: Prioritisation

The larger the value of AI, the worse is the access problem. The target areas are then ranked/prioritised accordingly. The target area with the worst access indicator in a particular sector gets the highest priority for access interventions in that sector.



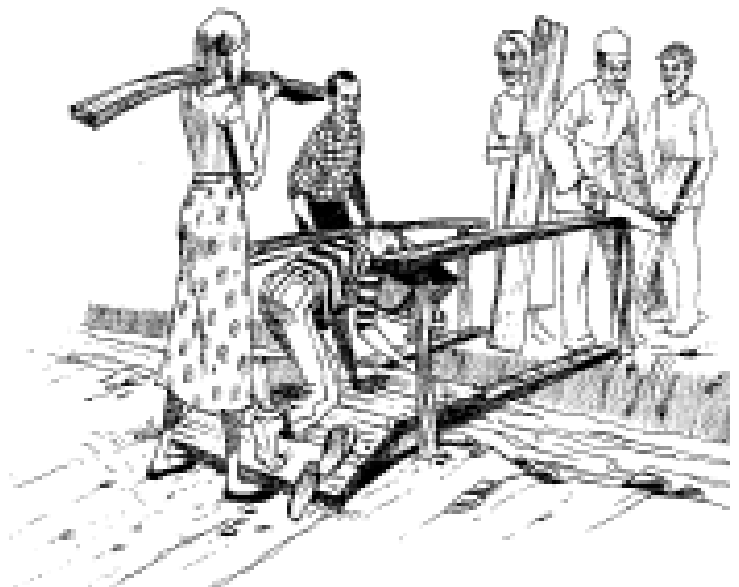
Step 5 and 6: Data validation and defining targets and objectives

The access profiles will be presented and the gathered data validated in a training workshop which is participated in by representatives of local authorities, organisations and communities. During the workshop the sectoral objectives for access improvements will be defined. Where national targets exist, these will be used to define overall objectives, e.g. all households in an area should have direct access to potable water, not exceeding a distance of 500 meters, all

year around. The targets should be realistic and attainable, based on the available resources.

Step 7: Project identification

The results of the above mentioned workshop contribute to identification of a set of interventions/projects which would most efficiently reduce the time and effort involved in obtaining access to supplies, services and facilities. These interventions are related to transport (rural transport infrastructure, low cost means of transport or transport services), and non-transport services (e.g. better distribution or the most appropriate locations of services).



Step 8: Implementation, monitoring and evaluation

The identified projects are then considered and integrated into the overall local development planning system for implementation, monitoring and evaluation. The target communities and organisations are involved not only in planning but they also contribute to implementation and maintenance of what has been planned.

How the rural transport burden is distributed between men and women

Studies carried out by the ILO and the World Bank over the last decade in Africa (Burkina Faso, Ghana, Malawi, Tanzania, Zambia and Zimbabwe) have provided detailed insights into both access problems and the corresponding magnitude and distribution of the transport workload among rural households. In general, the transport responsibilities of women and men are quite separate, being influenced by culture, custom and overall household responsibilities. Transport consumes a major part of the household's time and involves a major physical burden.

In Africa in particular, women's traditional role as the bearers of loads often means that they have to carry the weight of the transport burden. This is particularly evident in female-headed households, which tend to be the poorest.

and takes account of the clear distinction between the sexes in terms of transport needs and patterns. In doing so, the women's perspective and needs will be incorporated into the planned interventions, and the burden of transport may be reduced for both sexes.

- Accessibility Planning has been designed to assist local-level planners to make appropriate investments of the limited funds available to them. The focus on the local level also provides a basis for developing the capacity of local-level planners.
- Two points are necessary to raise here. The Accessibility Planning procedure is not a planning system. It provides a basis for establishing priorities for access improvement in the sectors that it deals with. It is a tool for physical planning that captures access problems and identifies a set of prioritised interventions that address these problems in rural communities. It can be inte-



It is also suggested as one of the reasons for young girls dropping out of school in higher numbers than boys. Studies carried out in the above mentioned countries show that the female contribution to household transport in rural areas ranges from 75 to 85% of the total transport burden.

Features of Rural Accessibility Planning Tool

- Accessibility Planning (AP) covers several sectors. In particular, it provides detailed data on the access that rural households have to services and facilities. These include water, energy, health, education, markets, agricultural inputs, agricultural outputs, crop marketing and post-harvest facilities.
- Accessibility Planning is gender sensitive and involves both men and women in the local level planning process,

grated into the local level planning structure process for implementation.

- Accessibility Planning is important not just because it provides an effective local planning tool. Its real importance lies in its potential to bring together the two aspects of accessibility – mobility and proximity – in a sensible manner. It suggests that access, rather than transport, should be looked at as the facilitator of development.

Note: The above paper provides a glimpse of what the rural accessibility planning tool is, and how it can be used. For additional information contact Dr. Fatemeh Ali-Nejadfard, Senior Technical Adviser, Access and Rural Employment, ILO/ASIST, Harare.

ASIST review and planning exercises 1999

By Terje Tessem, Programme Director

The ASIST programme is at present funded for another year, i.e. to the end of 2000. In order for the stakeholders to decide what should become of ASIST, if anything, after the end of the present phase, the donors and ASIST management involved themselves in a major exercise of review and planning over the last few months.

The donors first conducted an independent review by engaging two consultants, Messrs. Hjelm and Hogseth, whom many of the Bulletin readers met during their visit to a number of African countries. Their review report, which was good reading for the ASIST team, recommended that the programme should be continued for another three years as of January 2001. Despite a good intention of institutionalising activities and operations of ASIST during the present programme phase, the evaluators agreed that the time given was not sufficient to undertake such a major move. Furthermore, some of the activities presently carried out by ASIST would not naturally be taken over by any private institution or run on a commercial basis by any other organisation after being handed the task from ASIST. Indeed, the review team recommended that the ILO should continue to play an important role in the further promotion and development of labour-based technology in rural and urban areas, but focusing more on the multi-sectoral activities which the review team saw as the major future market as

compared to the sectoral (read: road) activities.

The independent donor review report and preparatory papers on the possible future of ASIST's involvement in labour-based technology were the background documents presented at a Review and Planning Workshop that took place in Harare 23-26 November 1999. A number of partners from 'ASIST' countries in eastern and southern Africa; including different ministries, councils, NGOs, training institutions, universities, consultants, contractors, etc. participated together with six donor representatives and ILO staff.

The outcome of this workshop, which has been documented in a workshop report, is that ASIST should continue for another three years. The scenario of closing ASIST at the end of year 2000 and largely transferring the service provision to the ILO proper right now did not get any support from the participants. Two different scenarios for how the continuation could be provided were worked on, including the status quo scenario basically consolidating and limiting activities to 'ASIST core' coverage, and the expanded version where the new elements of recent ASIST involvement and coverage were adequately addressed through appropriate resource allocations. The support for the two scenarios were about the same in numbers among the ILO partners (donors and country representatives). However, it is very clear that the financiers would rather

prefer the consolidating approach to the continuation of ASIST, whilst the technical partners in the countries represented would prefer that ASIST was put in a position to respond to an increased demand for its services.

A major element in this discussion is the role of the ILO and its different offices in the future. Following a reduced attention (and staffing) to this programme from ILO management over the past few years, there is now an increased interest in the Employment-Intensive Investment Programme within ILO. The donors would like to see this materialise in terms of direct support and commitments to further investments by the ILO in this field. This move would be complementary to the institutionalisation taking place at present, which mainly includes the developed training services and partly the advisory support provided by the ASIST team.

The next step now is to produce a Programme Document for the next phase of ASIST covering the period from 2001 to the end of 2003. Clearly, the ASIST management will make every effort to respond to the challenge set by the donors. It would be too bad to let our partners down following the interest shown by the country representatives during the two review exercises described above. Indeed, we believe firmly that we will be able to get a clear message from the ILO side and that a programme will be agreed upon for another three-year phase.

Note: The reports produced during this exercise are available from the ASIST offices on request. These include the independent donor review, two preparatory papers by ASIST and the review and planning workshop report ■

ASIST staffing

An update of recent events

There has been a number of changes, indeed some major changes, to the staffing situation in ASIST recently. This means that some of our staff have been and are now leaving whilst others are joining the team.

Since our last Bulletin, Sam Orwa has returned to his post in the Kisii

Training Centre, Kenya. We hope that the international exposure and experience gained by Sam during this detachment will be useful for Kisii in the years to come. You will have noticed that Kisii is now providing international training services largely independent of ASIST.

Jan Fransen has been working with ASIST as a training and urban adviser, but has now decided to return to his home country. We will be missing Jan's capacity in the further development of the urban upgrading programme. However, we may be able to count on his inputs from his new home in The Netherlands from which he is working as a consultant.

Africa has been lucky to secure the services of a 'well trained' ASIST colleague from Asia. Following two years in Bangkok, Jan Sakko, who

originally comes from The Netherlands, joined the Harare team as an Associate Expert in Employment-Intensive Strategies and Planning in November 1999. Surely, the Asian crisis gave Jan a rapid introduction to the so-called mega-sized labour-based programmes being designed in that region.

We have also finally been able to recruit a new Norwegian-funded Associate Expert Marie Winsvold, who has been exposed to labour-based works during a two-year assignment in Botswana, has joined the Nairobi office as of January 2000. Her experience with training and a variety of projects will be very useful in her role supporting both urban and rural programmes as well as training developments.

On the administrative support side, Lorraine Moses left ASIST in December 1999. When you call (on) the Harare office, you will now be met by the nice voice of Mercy Nyamanhindi, who will guide you to the right person.

I am now leaving the team to replace Jan de Veen in Geneva. Jan is taking a break for a couple of years in his native Holland and I will therefore join the new Employment-Intensive Investment Branch, the unit of the ILO to which ASIST is reporting.

Jane Tournée has been promoted to the Programme Director post as of 1 February 2000. Jane has now been with ASIST for about three years, and with the ILO for a somewhat longer time. We know her strong capabilities in the labour-based field acquired through hard field work, both in rural and urban areas in a number of African countries. There is no doubt that ASIST has got an experienced labour-based specialist at its helm. Good luck, Jane!

By Terje Tessem

Regional Seminar for labour-based practitioners

The 8th Regional Seminar for labour-based practitioners is planned for October 2000 in Cairo, Egypt.

For further information contact: ILO/ASIST Harare or Nairobi, or Social Fund for Development

Attn: Hany Attalla

Tel: +202-338071/9

Fax: +202-3380970

Email: zayaya@ritsec3.com.eg

New publications

EIP environmental guidelines series

Guide I: Environment, poverty and the use of local resources for sustainable development

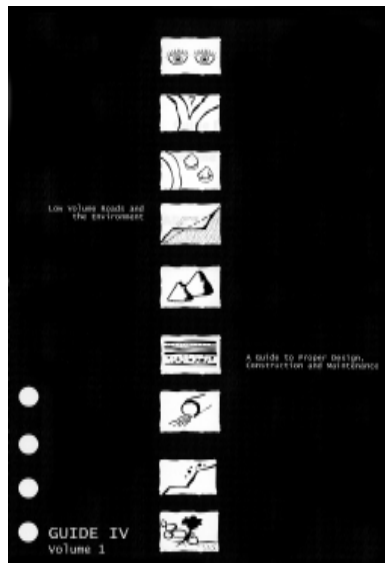
Guide II: Project cycle and environmental assessment

Guide III: Environmental impacts and rural access

Guide IV: Low volume roads and the environment: A guide to proper design, construction and maintenance

Per Mogstad; Terje Tessem, et al.

ILO. 1999. US\$ 14.50 (set of four). Ref. Nos. 09733 - 09736



The main objective of these guidelines is to enhance the optimal use of local resources in sustainable and environmentally sound infrastructure development strategies and community-based access programmes. They promote a project cycle integrating environmental concerns into the identification, design, planning, execution, operation and maintenance of infrastructure development projects.

Guide I provides a general introduction to the subject, discussing the relationship between environment, poverty, employment and development. Guide II focuses on the project cycle in relation to environmental assessment. Guide III concentrates on the environmental aspects of rural access and transport programmes and Guide IV gives practical environmental guidelines for rural road construction and maintenance. In addition there are two case studies from Kenya and Nepal.

These guidelines may be applied at all levels, from project identification, design and planning to execution, and should be integrated into the training of policy makers, planners, technicians and people at local level.

An opportunity for employment creation, labour-based technology in roadworks: The macro-economic dimension. Socio-Economic Technical Papers series (SETP) No. 5

Gary Taylor and Moses Bekabye

ILO/DANIDA. June 1999. ISBN 92-2-111827-4. 69pp. Price on application. Ref. No. 38229

This report is based on a study carried out in Uganda to evaluate the potential of using employment-intensive technology in the rehabilitation of feeder roads as a means of building infrastructure while at the same time generating employment and combating poverty. The study concentrates on economic aspects rather than technical ones. The study confirms the hypothesis that labour-based approaches are viable and offer high employment potential, as well as greater indirect benefits to the national economy than conventional equipment-based technology. The main conclusions indicate that a switch towards more labour-based methods could generate very significant benefits for the poor in the form of employment opportunities, and for the country in terms of GDP and foreign exchange savings.

This comparative study between labour-based and equipment-based methods for rural feeder road improvement would be useful to those involved in the policy formulation process regarding employment generation through infrastructure development.

Rapid assessment of poverty impacts (RAPI): Elaboration of a rapid survey method of assessing the poverty reduction impacts of pilot employment projects. SETP No. 2

Laura Murphy

ILO. 1998. ISBN 92-2-111140-7. 105pp. Price on application. Ref. No. 14115

This document describes a cost-effective method for assessing the impacts of small-scale employment-intensive projects on poverty. The method is referred to as 'rapid assessment of poverty impacts' (RAPI) as it draws on 'rapid' survey-based approaches to poverty monitoring. The paper discusses issues that arise in using the method for assessing rural roads projects, how it would be adapted to these and other types of projects. This paper is not a manual but rather a description of a general method which will have to be adapted in accordance with the type of project and local circumstances.

Of nets and assets: Effects and impacts of employment-intensive programmes – A review of ILO experience. SETP No. 1

Willem Keddeman

ILO. 1998. ISBN 92-2-111139-3. 52pp. Price on application. Ref. No. 14114

Since the mid 1970s, the ILO has been promoting employment-intensive public and community works programmes as a major means of job creation and poverty alleviation in developing countries. Various studies have been conducted to investigate the socio-economic impact of different types of interventions. This paper presents the findings of a systematic review to appraise the impact assessment methodologies applied in conducting these socio-economic impact studies and to draw some general conclusion about immediate, long-term and durable effects of project activities. The review concludes recommendations with respect to the methodology for impact assessments, and that assets and benefits produced with labour-based methods may be more easily sustainable than those produced with more traditional methods, but the long-term impact on poverty alleviation needs to be more fully documented.

Book review

Storm Drainage. An engineering guide to the low-cost evaluation of system performance

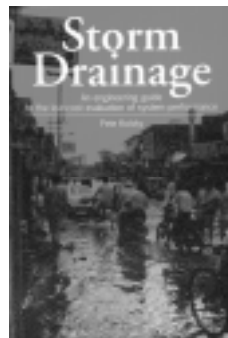
Peter Kolsky

IT Publications. 1998. ISBN 85339-432-7. 134pp. US\$22.00. Ref. No. 09727

Reviewed by David Mason, ASIST, Nairobi

'This book is mainly concerned with surface water drainage in low-income urban areas in developing countries. It deals with both open and closed drains.

The purpose of this practical guide is to help engineers (in particular municipal engineers) and development workers understand surface water drainage problems so that they can work on more realistic solutions. It starts from the recognition that millions of slum residents across the world suffer



the hazards and misery of frequent flooding, and draws upon the results of two and a half years of fieldwork in the city of Indore in India.

The book focuses on three questions:

- What is drainage performance and what happens when it floods?
- What are the effects of solids in drains upon performance?
- How can we evaluate a drainage system, to assess how best to improve its performance?

It includes a comprehensive checklist for drainage evaluation, tables and graphs of data, and hydrological equations with worked examples.

It is now one of the recommended textbooks for ASIST's new international course on community-managed upgrading of urban low-income settlements.

Employment creation without extortion

Labour policies and practices workshop, Zambia

By Tomas Stenström, ASIST, Harare

In employment-intensive investment programmes (EIIP), the issue is how to manage large workforces in order to provide workers with decent working conditions and achieve satisfactory levels of productivity. National rules regulating the temporary employment of workers and small contractors working in employment intensive programmes are often either irrelevant, or need to be developed from the ground up

The workshop held in Zambia between 30 November and 1 December 1999 was the first in a row of workshops planned at national level in countries employing labour-based methods. Some 25 participants representing government, employers and workers organisations, as well as donor organisations attended the tripartite workshop.

The aim was to promote the application of labour standards in EIIPs, and share experiences on how unorganised workers and small-scale employers can best be served by existing national institutions, and how relevant labour standards can be progressively introduced. The immediate objectives for the two days were: to get the subject matter understood and to make an inventory of achievements and constraints in the case of Zambia and secondly to develop a concrete action plan with clear roles for the stakeholders to overcome the constraints that were identified.

The workshop, recommended that: i) a task force look into the issue of how temporary workers in EIIPs could best be represented, and ii) a forum with all major stakeholders be established by March 2000, to discuss further the relevance of current legislation and conditions of contracts.

Forthcoming events 2000

Conferences, seminars and workshops

CODATU World Congress of Urban Transportation, 11-14 April, 2000, Hotel Maria Isabel Sheraton, Mexico City, Mexico. Fee: CODATU members, US\$600, others US\$750.

Contact: Rue Maurice Audin
69 518 Vaulx-en-Velin-Cedex
France
Fax: +33-472-04-7702

Training courses 2000

TRL Courses

Management of Appropriate Technology Roadworks, 26-30 June, 2000. Transport Research Laboratory, United Kingdom. Fee: £1,600.

Roads and Transport in Developing Countries, 4-14 July, 2000. Transport Research Laboratory, United Kingdom. Fee: £3,200.

Contact: Course Director, International Development Unit, Transport Research Laboratory (TRL).
Fax: +44-1344-770719/770356
Email: lparsley@trl.co.uk or international_enquiries@trl.co.uk

IHS courses

Municipal Environmental Policies and Local Agenda 21, 19 January – 19 April, 2000. IHS, The Netherlands.

Urban Infrastructure Management, 19 January – 19 April, 2000. IHS, The Netherlands.

Urban Environmental Management, 3 May – 2 August, 2000. IHS, The Netherlands.

Local Government and Non-governmental Actors: New tools and Working Approaches (LG).

Contact: Institute of Housing and Urban Development (IHS)
Tel: +31-10-402-1550
Fax: +31-10-404-5671
Email: admission@ihs.nl

WEDC Courses

Short courses

Community Water Supply and Sanitation, 5 April – 16 June, 2000. Fee: £6,060.

Community Management of Urban Services, 5 April – 16 June, 2000. Fee: £6,060.

Community Solid Waste Management, 5 April – 16 June, 2000. Fee: £6,060.

Practical Water Supply and Sanitation, 19 June – 7 July, 2000. Fee: £2,020.

Distance Learning

WEDC now offers the following modules by distance learning at a fee of £800 each.

Community Management

Low-cost sanitation

Urban Infrastructure

Water and Environmental Health

Water for Low-income Communities

Contact: Water, Engineering and Development Centre (WEDC) Institute of Development Engineering
Tel: +44 -1509-222885
Fax: +44-1509-211079
Email: WEDC@lboro.ac.uk

IHE course

International Short Course on Labour-based Road Engineering, 3-7 April, 2000. IHE, Delft, The Netherlands. Fee: Dfl 2,500, includes tuition and course material. Travel costs and lodging are not covered.

Contact: International Institute for Infrastructural Hydraulic and Environmental Engineering (IHE)
Tel: +31-15-215-1715
Fax: +31-15-212-2921
Email: ihe@ihe.nl

KTC courses

Supervising Labour-based Contracts course, 6 March – 1 April, 2000, Kisii Training Centre, Kisii, Kenya. Fee: US\$4,200, includes tuition, field visits, practical training, course materials, transport, meals and

accommodation and per diem allowance of US\$10 per day.

International Senior Technicians course, 10 July – 12 August, 2000, Kisii Training Centre, Kisii, Kenya. Fee: US\$5,200, includes tuition, field visits, practical training, course materials, transport, meals and accommodation and per diem allowance of US\$10 per day.

International Engineers course, 9 October – 18 November 2000, Kisii Training Centre, Kisii, Kenya. Fee: US\$5,900, includes tuition, field visits, practical training, course materials, transport, meals and accommodation, and per diem allowance of US\$10 per day.

Contact: The Resident Instructor
PO Box 2254, Kisii, Kenya.
Tel: +254-381-30699.
Email: KTC@form-net.com

ESAMI courses

Transport Economics and Policy, 1-19 May, 2000, Nairobi, Kenya.

Construction Management, 22 May – 16 June, 2000, Mombasa, Kenya.

Contact: Resident Representative, Eastern and Southern Africa Management Institute, (ESAMI)
PO Box 56628, Nairobi, Kenya
Tel: +254-2-441513/4, 441061
Fax: +254-2-442231
Email: esami@africaonline.com.ke

Urban Transport Planning and Management, 10-21 July, 2000, Harare, Zimbabwe.

Contact: Resident Representative, ESAMI
PO Box 2627, Harare, Zimbabwe
Tel: +263-4-706438
Fax: +263-4-706439
Email: esamihre@africaonline.co.zw

Road Maintenance Planning and Management, 6 November – 1 December, 2000, ESAMI Headquarters, Arusha, Tanzania.

Contact: The Admissions Officer, ESAMI
PO Box 3030, Arusha, Tanzania.
Tel: +255-57-8383/8
Fax: +255-57-8285
Email: esamilib@habari.co.tz

Transfer of knowledge on labour-based technology in Nepal

By Jan Sakko, ASIST, Harare



photo by Danang Parikesi

Teaching staff and ILO facilitators at Institute of Engineering, Kathmandu

The long history of labour-based and appropriate technologies in Nepal has generated a variety of training activities. This capacity is spread across line ministries, NGOs, international donor projects, and district and village development committees. ASIST-Asia Pacific saw a need to properly preserve the rich variety of experiences that are historically and currently available, and to strengthen the transfer of knowledge to a wider audience. ILO/ASIST-Asia Pacific and the Institute of Engineering of the Tribhuvan University in Kathmandu signed an agreement in March 1999 to document all labour-based technology practices in the construction of rural roads, trails, suspension and foot bridges, irrigation canals, and structures for erosion protection. The Tribhuvan University is a member of a network of Asian and African technical universities with which the ILO's Employment Intensive Investment Branch in Geneva has established partnerships. The Institute of Engineering has put together a broad

collection of labour-based technology manuals, technical reports, case studies, handbooks and reviews, with cooperation from the ILO office in Kathmandu and other international agencies. Bio-engineering techniques, and practices in rural transport and planning, are also documented. The result is a stand-alone library that spans all elements of project planning and implementation. The materials are kept at the Institute and can be studied or copied by students, teachers and practitioners from outside the university. All materials are described in a Labour-Based Technology Source Book for Nepal.

The Institute of Engineering also organised a workshop on the integration of best practices in labour-based technology into university courses and curricula, with the support and facilitation from ASIST-Asia Pacific and the ILO office in Kathmandu. The teaching staff of the engineering and architecture disciplines, faculty management, and representatives of other technical education institutes gathered on 13 October 1999 at the

Institute. Dr. Jib R. Pokharel, Faculty Dean, stated in the opening address that "Labour-based technology is simply part of the development of Nepal, and could therefore not be excluded from the engineering curricula". Professor Dr. R.K. Poudyal, head of the Civil Engineering Department, encouraged his colleagues to assess in which field labour-based work methods could create the highest impact. The participants firstly discussed how to successfully integrate the principles of labour-based technology into syllabi and courses of the undergraduate programme. Most teachers found that this can be done through minor changes in a few mandatory courses. Further discussion is required to determine if graduate courses in labour-based technology should be elective or mandatory. The participants concluded that the promotion of labour-based technology within the university is best achieved through field research, theses, and successful career examples; outside the university through partnerships with government institutions, international organisations, and NGOs. ■

Labour policies and practices presentation package

Based on the comprehensive guide dealing with 'Labour policies and practices for employment-intensive infrastructure programmes', published in 1998, ILO Geneva has developed a presentation package on this issue. The package includes a series of 13, four page coloured brochures, dealing with the most important labour issues in this field, including notes and overheads, enabling non-specialised lecturers to make presentations on this subject. The leaflets are available from ILO/ASIST, Nairobi and Harare offices.

ILO/ASIST Harare, has produced one general and one training video, (approximately 20 minutes each), dealing with the introduction of labour-related issues into public works programmes.

Labour-based works in Lesotho

By Celestina Pama, LCU, Lesotho

The Labour Construction Unit (LCU) is one of the Departments of the Ministry of Works and Transport in Lesotho. This department has now merged with the Civil Works Section of the Ministry of Works, to form the Department of Rural Roads (DRR). The mission statement of the new department is: provision of all weather rural transport infrastructure using labour-based methods.

Current responsibilities

Current responsibilities include the construction and maintenance of all rural roads allocated to DRR. Secondly, the completion of construction of about 1000 km of Lesotho Highlands Revenue funded community road projects. Thirdly, the maintenance of completed rural road infrastructure constructed by Lesotho

Highlands Development Authority around the dams. Fourthly, the construction and maintenance of footbridges and rural airstrips in the remote parts of the country.

Capacity building

There is insufficient capacity to implement the expanded programme. Therefore in order to implement the expanded programme, the LCU is following a number of strategies to build capacity:

- a) Training and development of small scale contractors; currently all maintenance and rehabilitation works are carried out by contractors.
- b) Increasing force-account teams by training supervisors
- c) Increasing in-house capacity for supervision and design by orientation and use of local consultant firms and use of long-term local consultants.

General Progress

Six training courses consisting of an average of 12 candidates per batch have been running since 1993. To date, about 56 contractors have been trained in road rehabilitation and maintenance. Eleven construction companies consisting of five participants per company (Managing director, one site agent and three technical assistants) are undergoing a road construction course that started on the 16th of September 1999. The course will be completed in September 2000.

Contractors will carry out part of the new construction works in the year 2000, while the remainder will continue to be carried out by force account teams. The rehabilitation and construction works carried out by contractors are being supervised by consultants. ■

For more information contact:
Celestina Pama, Chief Engineer
Ministry of Works
Labour Construction Unit
PO Box 1283
Maseru 100, Lesotho
Tel: +266-314514/500770
Fax: +266-210508

Urban training Engineers and planners course

By Wilma van Esch, ASIST, Nairobi

Based on a training needs assessment in 1998, the need and demand for training of urban engineers, planners, technicians and community foremen was established. Although the education of technical personnel may have equipped them to construct roads, drains, water supply and sewerage systems, it has not prepared them for the challenge of working in unplanned areas. In the poor un-serviced urban areas labour-based technology is almost a must, as access is very limited and co-operation with the community is essential.

Hamish Goldie Scot of Scott Wilson in the UK, and Jan Fransen, of ILO ASIST, developed training material for urban engineers and planners. The first international pilot course

was organised in Tanzania by the University College of Land and Architectural Studies in Dar es Salaam and ILO ASIST from 1-12 November 1999. The pilot course can be considered as a broad success, with 18 participants attending the course from Ethiopia, Kenya, Tanzania, Uganda and Zambia, at almost full cost recovery. As intended, it provided the participants with an introduction to new concepts and challenged them to apply what they were being taught in project assignments. The project assignments were based on actual data from an unplanned area in Dar es Salaam, and developed in close co-operation with Concern, an institutional NGO. According to the evaluation and

individual action plans the course had a marked impact on participants' attitudes towards community managed and labour-based construction.

Plans are currently underway to conduct a second international training course for urban engineers and planners, and to develop training material and a course for community foremen/women.

Training of community-based organisations

In Lusaka (Sustainable Lusaka Programme), training material is being developed for training of community-based organisations on how to complete a business plan for the operation of a water distribution system, and for waste collection services. This training material is based on the ILO's Start and Improve Your Business training material for micro-entrepreneurs. ■

South Africa community based public works programme — policy research series

By Craig Harvett, Policy Section, Community Based Public Works Programme, South Africa



Photo by Charles Naismith

Construction of a building at a community garden for the storage, sorting and preparation of vegetables prior to their transport to market

In Bulletin No. 8 (January 1999) Colin Relf, Technical Adviser to the Community Based Public Works Programme (CBPWP), provided an account of the progress with respect to the UNDP-financed project. This outlined in particular the value of the 1996/1997 evaluations of the programme, as well as other interventions, in co-operation with the Department of Public Works (DPW). In addition to the interventions mentioned in the article, is the compilation of a second policy research series aimed at enhancing the CBPWP with respect to the findings and recommendations of the evaluation and subsequent changes to the CBPWP.

The first policy research series, commissioned in 1997, focused on a set of high priority issues in Public Works Programmes, including targeting, poverty alleviation and international perspectives.

For the second policy research series, the DPW began from its own perspective to identify operational issues affecting the CBPWP. These were captured in a discussion paper that formed the basis of subsequent discussions with other departments administering similar programmes. The aim was to reach inter-departmental consensus on priority issues that should be investigated. The underlying objective is to pursue policy convergence among different departments and programmes. It is expected that this will not only lead to greater consistency of approach, but will also permit the achievement of synergy among different programmes.

The policy issues, grouped into four themes, are as follows:

Theme 1: Site Level and Implementation

- Wages
- Training

- Gender equality
- Role of small and emerging contractors
- Capacity of programme implementing agents.
- Theme 2: Inter-Programme
 - Inter-programme co-ordination
 - Financial planning time frames.
- Theme 3: Costs and Benefits
 - The balance between social and economic imperatives
 - Environmental impact assessments.
- Theme 4: Sustainability
 - Operation and maintenance.

The identified priority issues for this policy research series include: operation and maintenance, financial planning time frames and the capacity of programme implementing agents.

The financial planning timeframes and capacity of programme implementing agents research papers are being financed by the DPW, whilst the paper on operation and maintenance is being funded by the ILO. The operation and maintenance research paper is the most critical, in that the development of feasible procedures and systems for the operation and maintenance of local level physical infrastructure is essential for the sustainability of continuing benefits from the programme. This research paper is, therefore, expected to make practical recommendations on specific measures likely to ensure the operation and maintenance of different types of assets being provided by the CBPWP. The long-term aim is to enable the DPW and other concerned departments to draw up both policies and practical guidelines for programme administrators, project planners, managers and beneficiary communities to maximise the prospects for successful operation and maintenance.

Research on all three policy research papers started in early December 1999 and will be complete by April 2000. ■

CONTACTS database of CVs

ASIST maintains a database of CVs of practitioners and others involved in labour-based technology. Registration with ASIST facilitates networking and recruitment for long and short term job opportunities.

If you are interested in registering, send your CV to the Administrative Officer, ASIST, PO Box 60598, Nairobi, Kenya

Rehabilitation and maintenance of district and feeder roads in Mwanza region, Tanzania

By Lasse Melgaard, UNCDF/UNDP, Tanzania



Rehabilitation work in progress on the Lugeye-Kigangama road in Magu district, Tanzania

Cradling the south-western part of Lake Victoria, Mwanza region has recently seen the introduction of a new method of road construction. For the past year, the UNCDF/UNDP Rehabilitation and Maintenance of District and Feeder Roads project has been busy with on-the-ground training of local contractors, district engineers and technicians in labour-based road rehabilitation in Magu, Sengerema and Geita districts.

Seeking to revive nearly 200 km of roads utilizing labour-based methods while creating capacity in the District Councils, and in the private sector, to rehabilitate and maintain a network of roads, the project is now nearing completion of the first trial contracts with private contractors. The six best performers will start civil works this year, supervised by the District

Councils and consultants, who are also trained as part of the project.

Providing direct cash income for villagers during times of agricultural inactivity, the project utilizes one of the region's most abundant resources: labour. Approximately 40 villages with an average population of 1000 each will benefit directly from the project. Villagers will earn about 600,000 person-days of income. Moreover, access to markets will be improved. Access stretches linking fishing villages to vital arteries of the road network have already seen a three-fold increase in traffic, leading to increased economic activity.

The sense of ownership and participation, also a critical component of the project, will continue to make the project feel like a home-grown initiative in the eyes of the

people it affects. This is aptly illustrated by the response of one villager who, when asked who was building the road, replied:

"We are!"

For more information on this project, please contact:
Mr. Lasse Melgaard
or
Mr. Daimu Mkwawa
UNCDF/UNDP
P.O. Box 9182
Dar es Salaam
Tanzania
Fax: +255-51-113272
Email: lasse.melgaard@undp.org or
daimu.s.mkwawa@undp.org