ASIST

ADVISORY SUPPORT INFORMATION SERVICES AND TRAINING FOR LABOUR-BASED PROGRAMMES

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Creating an enabling environment for small-scale contractors

By Gamelihle Sibanda, Technical Adviser, ILO/ASIST, Harare

Allocating small-scale contractors a fair share of works

The definition of a small-scale contractor varies from country to country. For this article, a small-scale contractor is defined broadly as one with limited capital investment, who may need financial and managerial support to effectively run his or her business.

Enabling environment

For small-scale contractors, creating an enabling environment includes removal of barriers to their entry into the market, and to their growth and sustainability. Part of the enabling process may be to offer the small-scale contractors support, which will facilitate their access to the necessary resources to start and sustain their businesses.

Why support the private sector?

Most governments have decided to outsource to the private sector some of the activities that were previously carried out in-house by government departments. Due to the absence of suitable small-scale local entrepreneurs in most countries, it has been found necessary to develop and empower Small and Medium Enterprises (SMEs) to participate in contracting. The initiative to support the SMEs has mainly been the direct or indirect responsibility of governments.

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Contracting in employment-intensive works

Editorial

Having gone through a few softer elements of the ASIST programme over the last two Bulletins, we focus on contracting in this issue.

Much has been said about an appropriate contracting environment, we are not attempting to document all that here. We are, however, in this issue discussing what measures should be taken to enable the establishment and growth of sustainable enterprises for both rural roads and urban works. This is supported by examples of interventions from some African and Asian countries, as well as articles on technical issues like equipment and quality control measures supporting the sustainability of small enterprises.

We also feature an article on prioritisation of rural access roads developed in South Africa. It is a scientific and transparent method of road investment rankings, which could be applicable in economies of a similar nature.

We hope that you will find some of the introductions and brief descriptions in the Bulletin of interest and would welcome your enquires for further information. The report from the Regional Seminar for Labour-Based Practitioners will soon be out with a number of interesting papers and proceedings addressing the theme 'Contracting in Employment-Intensive Works'. You should make sure that you get a copy!

The work of ASIST

ASIST is a programme of advisory support, information services and training, within the EIP programme of the ILO. The Employment-Intensive Programme (EIP) 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.

ASIST currently comprises two regional support programmes in Africa and Asia working within the framework of the EIP. 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 rural travel and transport 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 rural travel and transport. 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 rural travel and transport.

Training

ASIST provides support to national training institutions and universities in the development and provision of training in labour-based technology and rural travel and transport. 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 supervisers and trainers, organised by the Ministry of Public Works and Housing, Kisii Training Centre, in Kenya.

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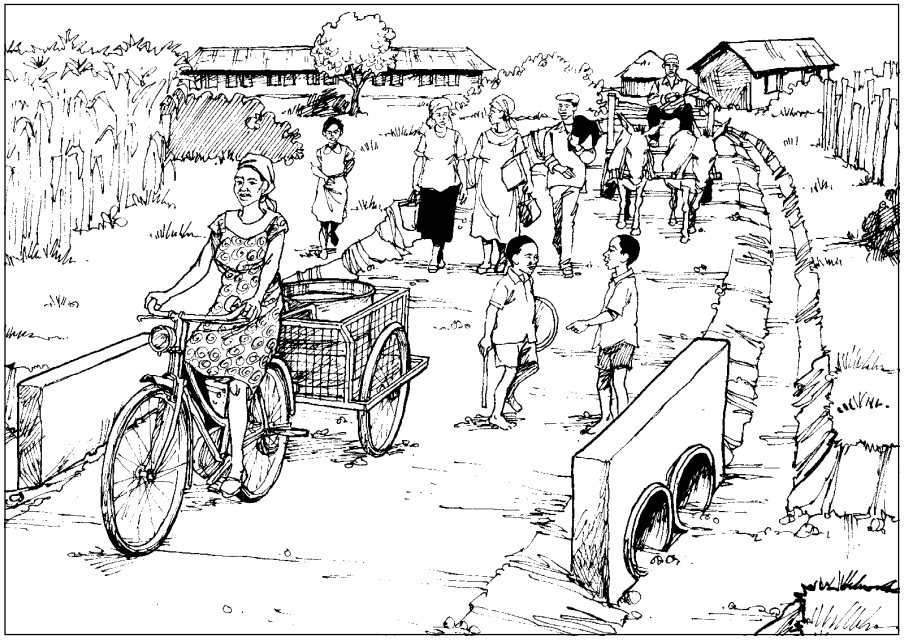
Stakeholder participation in rural access road prioritisation: The South African experience

By Vivienne Lipman, Senior Policy Adviser, South African Department of Transport



Meeting access needs of rural communities

Introduction

In South Africa, as in most of the continent, the demand for rural access roads is far in excess of what can be supplied in the face of limited resources. Road authorities are often presented with a long list of demands for roads and with communities lobbying for their roads to be given priority. In this situation, it is essential for the authorities to have a uniform approach, which enables them to compare roads and to rank them in order of priority. They need to employ a methodology that is both scientifically robust and transparent to the communities in need.

Both in the KwaZulu Natal province's Community Access Road Needs Study (CARNS) and the Eastern Cape Rural Access Road Study (which was undertaken as part of the Moving South Africa long term strategy for transport in South Africa) methodologies which included community consultation in the prioritisation of rural access road needs were adopted. This methodology not only created a climate of trust but also contributed to a high level of co-operation with communities who now understood the prioritisation process.

The roads which were studied were not those which could be evaluated in terms of an economic cost benefit analysis, as they would generally give negative results because of low vehicle usage. Most of these roads can only really be justified from a social perspective. The question, which Moving South Africa tried to answer, was "to what extent should we invest in providing basic access roads, and which communities should receive priority?"

The Kwazulu-Natal community access roads study (CARNS)

In looking at various South African and international methodologies for identifying and prioritising rural access road needs, the Moving South Africa team was impressed with work that had been undertaken in the KwaZulu-Natal province as part of CARNS. CARNS had produced a methodology, which combined community consultation with a transparent methodology, which could be explained to the community while at the same time being sufficiently rigorous to satisfy the professionals. The Moving South Africa team made various adaptations to the CARNS methodology.

The moving South Africa Eastern Cape rural access road study

The Eastern Cape Province was chosen because it is one of the poorest parts of South Africa with a Human Development Index (HDI) of 0.507 compared against the overall South African value of 0.705. In addition, 62 % of the population of the Eastern Cape is rural. With such high levels of poverty and most of the population being rural, the Eastern Cape provided an appropriate setting for the study.

The methodology

The methodology is divided into two parts. The first part explains how roads were prioritised in the study within each of the 37 districts covered by the study of the Eastern Cape. The second explains the methodology for allocating funding between the 37 districts.

Prioritisation of road projects

When evaluating a number of roads, all of which show negative economic returns, it is often difficult to prioritise whether one road is more important than another. The Moving South Africa study attempted to provide a uniform approach, which enables one to compare roads and rank them. The system is based on the probable usage that would be made of the road by the community (assuming the road is properly maintained). Points are allocated not only for the size of the community served by the road but also for the various facilities along the road

which are used by the community at large. The facilities include health, social and administrative services, agricultural activities, educational facilities, businesses and places of worship.

The total points are divided by the length of roads to give a rating value per kilometre. This effectively takes into account the relative cost of the projects. If this is not done then longer roads will generally rate higher than shorter roads.

A desk study was undertaken to gather basic data. Fortunately, a geographic information system (GIS) existed which gave the locations of schools, clinics, villages and the formal road network. Populations for villages were also available on the GIS. An initial prioritisation of access roads was made on the basis of ensuring that villages have an access road linking it to schools, clinics and the formal road network.

Information was collected for 37 district councils. Each district council has a Transitional Representative Council (TRC) which is the current district level government. The TRC was used to access community participation in each district. The TRC members and community members were tasked with recording the roadside features and population served by the roads. They were also requested to mark the positions of the roads on maps. Training and assistance was provided for this fieldwork exercise.

Points were allocated to each of the roads identified by the community/TRC using the merit assessment system described above. The priorities were then explained to the community. The results were compared with the findings of the desk study and differences in the findings were discussed with the community.

Prioritisation between districts

The methodology used four criteria for prioritising the districts in which road infrastructure would be upgraded. These criteria were population size, development potential, human development, and accessibility. Quantifying and combining the four criteria using district-based statistics provides a means of distributing funds on an equitable basis that takes into account need within economic growth potential scenarios.

The development potential index proved the most difficult to calculate as many of the factors which should ideally be included are not predictable, let alone quantifiable. We constructed development potential indices for the Eastern Cape rural districts using the following variables:

- natural water resources: measured length of river per district
- terrain conditions using length of 100 metre contours
- gross geographic product (GGP) adjusted to reflect the rural contribution
- economic interaction potential calculated as the accessibility-discounted GGP of all surrounding districts
- agricultural production potential calculated using factors such as climate, slope, soil type and the availability of water
- forestry production potential
- the likely effect of government supported spatial development initiative (SDI) projects on the district.

Fortunately, the information on natural water resources, GGP and agricultural and forestry potential already existed.

The human development index is calculated using three components: life expectancy at birth, educational levels, and income levels.

The accessibility index was measured using the road network density and the population density.

Using all the above factors with various weightings, the 37 rural districts in the Eastern Cape were given priorities for investment in rural access road infrastructure.

Design standards

Road design standards and literature in South Africa generally do not address the lower order rural access roads, and very little documented guidance is available to establish appropriate standards.

Any road improvement should be assessed and planned to meaningfully connect into the formal road network. Where possible, continuity should be established to open up areas and to link up communities.

Traffic volumes for rural access roads in South Africa are generally less than 30 vehicles per day. The importance of an access road is therefore not necessarily a function of the volume of traffic. The importance lies more with the type of traffic using the route, whether it be public transport or service providers like mobile clinics, teachers or agricultural vehicles. An assessment of traffic should, therefore, not only focus on the volume of traffic, but also on facilities and population served by the road.

The standards proposed should be discussed with local communities before commencement of construction to avoid any misunderstanding with aspects such as road widths and realignments.

Conclusion

The methodology used in the Moving South Africa study is not wholly ideal, but given the lack of existing data and limited resources, it was the best that could be achieved. If we had more time and resources, we would, for example, have preferred to increase the level of community participation. It is, however, also accepted that the data available in South Africa on, for example, agricultural potential, may not be readily available in many other African countries and this would make the use of a similar methodology difficult.

The question of "to what extent should we invest in providing basic access roads, and which communities should receive priority?" cannot be answered from a transport perspective alone. We need to question what we are providing access to, where will future investments in other economic and social infrastructure be made and what will these investments be, which communities are sustainable, and what other developments will affect that community. ▯

Community contracting — partnerships for infrastructure in urban informal settlements

By John Clifton, Consultant, Portugal

The problem

By early in the next millennium developing countries will have, for the first time in their history, more people living in urban settlements than in rural areas. The acceleration of urban development, often of informal settlements, has, deterioration of living conditions, unemployment or underemployment, and social and economic deprivation. This has often lead to unrest and insecurity. Many cities in developing countries now have more than 50% of their population living in such informal settlements. These have overwhelmed the capacity of the city authorities to provide adequate infrastructure in these informal settlements, which usually fall outside the normal policies and norms of the urban authority

Partnerships

In order to start to address these widening urban problems, new partnerships are being formed which draw in all development partners — government, city council or urban authority, communities, NGOs, private sector and donors. These new partnerships involve changed roles, particularly for government and city council (from provider, implementor and owner to facilitator) and for the communities (from passive beneficiary to active participant). These changed roles can lead to problems. The community becomes the owner of the infrastructure, with all the liabilities and responsibilities that come with ownership of an asset (management, maintenance, repair). The government or city council has to recognise the community (of the unplanned or informal settlement i.e. not previously recognised entity) as a valid partner.

Community action plans (CAPs)

The development of CAPs is a direct response to the familiar 'unsuitable design and/or no maintenance' scenario and is intended to involve all the project parties in preparation for infrastructure provision or upgrading in setting responsibilities and roles. CAPs include the needs and plans for infrastructure provision including function, level of service, standards and specifications, construction methodologies and modalities. They also set out the contributions of the various project partners.

Appropriate solutions

Informal settlements are characterised by tightly packed construction, high population density, cramped access and public space, and standards that are below national or municipal norms. There are, however, possibilities for relaxation of national standards, or introduction of norms which are more appropriate for low-income settlements without compromising safety or environmental considerations (e.g. constructing around obstacles instead of demolition). The challenge is to design infrastructure, which is technically adequate, durable, affordable and acceptable to the community that it serves. This tends to lead to solutions of modest scale, which can be constructed using simple techniques. This in turn lends itself to maximum use of unskilled labour, which is almost always readily available within the community. Restricted working space and often limited availability of construction equipment (which is usually very expensive to hire) tends to lead to the natural selection of labour-based

Photo by ASIST, Nairobi

Hanna Nassif, Tanzania: Women workers using head-pans to transport construction material

methods. Also within such settlements, the infrastructure to be constructed can usually be broken down into small packages which are ideal for a community to develop the capacity to construct, or to control the works of small scale contractors. The infrastructure includes, roads, drains, latrines, water supply, sanitation, etc.

Community participation

This involves the formation (election) of community development committees (CDCs) which are usually registered as community based organisations (CBOs). The representational problems, which can arise in connection with these CDCs, can sometimes be severe as often the community does not have a cohesive identity and consensus is difficult to achieve even where there is free dialogue.

The community can be involved in various ways in the implementation of infrastructure improvement:

- Self help (usually unpaid voluntary labour)
- Food for work (work organised as 'direct labour' or 'force account' using food for up to 50% of remuneration of workers)
- Labour only community contracts (community contractually organises labour under a contract but with other functions, such as procurement or handling funds, being undertaken by another body such as the city council or technical assistance to the 'project'. This is a valid arrangement which can assist the community to gain experience and can lead to …
- Full community contracting whereby the community have full financial and technical responsibility, including management of funds and procurement, while an external body or project technical support team assists with design and technical assistance

Contracts

In all cases where contracts are involved, the form of contract should be carefully scrutinised. Conventional forms of civil engineering contracts are designed for major construction works and are unnecessarily complicated, inaccessible, financially onerous for small-scale local contractors, and even irrelevant to small-scale community construction operations, however executed. Appreciation of the aims and obligations of contract partners is often sketchy, and complicated conditions of contract only lead to confusion or pragmatic abandonment of the contract agreement. In any case, provision usually has to be made for training of all parties to community contracts.

Conclusion

This note can only very briefly summarise some of the issues involved in the provision of infrastructure in (informal) urban settlements. While many of the basic premises of small-scale contracting and labour-based methodologies, which have been used for many years for rural infrastructure works, are wholly valid for the urban situation, they cannot simply be imported without adaptation. The urban institutional, social and representational situation is more complicated and requires greater participation and partnership effort than work in rural areas. The time required to establish these relationships must not be underestimated. The need for urban infrastructure, employment generation, and empowerment will grow ever greater over the coming decades and there must be a concentration of effort by all development partners to combat what ILO has dubbed 'the urbanisation of poverty'. ▯

Case study — contract issues
Hanna Nassif urban upgrading project
Dar es Salaam
Tanzania

The Hanna Nassif community has already successfully constructed infrastructure works in the informal settlement using employed labour from the community, and with external technical advice. A second phase of the project plans to extend these works by continuation of the community-executed works through community contracts, whilst at the same time awarding contracts for certain types of work to small-scale local labour-based contractors, in order to assist in the development of the small-scale contracting industry.

The immediate community reaction to this plan was to express general scepticism in the ability of the contractor (any contractor) to successfully undertake the proposed works. It was thought that the cost would be higher and the quality of work lower than that done by community execution and that there would be greater potential for 'evaporation' or misuse of funds and resources. Also, there was a sense of 'their' work being given to an outsider even though a condition of the contract award would be the use of labour from within the community to the greatest extent possible.

On the other hand, potential contractors state their total confidence in their ability to undertake works of this nature, whilst expressing some reservations about the potentially onerous supervision conditions which may be expected from the works being carried out very publicly in the middle of the community area, and in full view of the 'owners' of the completed works.

Both community and contractors have only a sketchy appreciation of the contract system in general, the component parts of the contract, and the use and application of these documents and procedures. This could obviously lead to problems of interpretation and execution during the course of works. The situation will not be helped if the forms of contract are too complicated or not appropriate for the proposed work situation.

The proposed solutions involve training of both contractors and community in contract administration, and ensuring the greatest possible transparency at all stages of the contract process-tendering, award, measurement, payment and so on. Community confidence in the contractor's ability to execute the works, and contractor confidence in the community (client's) ability to supervise, can only be gained from the successful completion of contracts, which in turn will depend upon proven application of contract procedures, technical knowledge and accountability. ▯

Contractor development in Mozambique

By Neville Weeks, Lea International Ltd., Canada

Introduction

Following 12 years of devastating war, Mozambique is gradually rebuilding its economy and its infrastructure, while at the same time taking the opportunity to develop a local road construction industry (LRCI). With support from the World Bank and other donors in the multi-faceted 'Roads and Coastal Shipping Project' (ROCS), a programme of major road building has been undertaken, with technical assistance provided to facilitate the institutional strengthening of the government road authority (Direção Nacional de Estradas e Pontes, DNEP) and capacity-building within the LRCI. Mozambique has no tradition of private sector involvement in road works, with government parastatals having been employed to construct and maintain the road network. Under the ROCS Project, it was recognised that there needs to be qualified private sector contractors distributed throughout Mozambique, with the capability to maintain the rehabilitated and reconstructed road network. The 'Contractor Development Teams (CDT) Project' required that existing small civil engineering contractors (mostly with building experience) be provided with road maintenance contracts; initially on a directed, negotiated basis, with supervision and technical assistance/ training provided on-site and in their offices by consultants. Lea International Ltd. of Vancouver Canada was engaged in 1996 to provide the required consulting services.

Objectives

The objective of the services was to develop a cadre of qualified local contractors that over time would be able to carry out the road maintenance needs of the Mozambican road network. Given the size of the country, the project also envisaged developing sufficient contracting capacity in all ten Provinces to ensure that all were adequately served, and to avoid the need for significant transportation costs. By the end of the project, the aim was to develop the contractors to a point where they would be able to participate in competitive tenders for roadwork (i.e. routine and periodic maintenance), either as individual entities or in association with other local firms or international companies.

Scope of services

The Lea CDT Advisory Team consists of six engineers and technicians working in each of three regions of Mozambique, and providing a range of technical assistance and training services to local emergent contractors, and to Provincial Engineers charged with administering the works and contracts. The consultancy scope of services has included: 'on-the-job' training of local contractors as they carry out road maintenance contracts (i.e. both technical activities on-site, as well as office-related planning, personnel management, accounting, cost estimating, bid preparation, invoicing, contract interpretation and control, quality assurance and project management). Workshops and seminars on subjects of perceived interest and need have been a regular feature throughout the project: These include financial and business management for the owners of the contracting companies, environmental requirements for roadwork in Mozambique, and current Government of Mozambique (GOM) and donor policies on gender issues.

Results and constraints

The prevailing conditions in Mozambique make labour-based methods the logical choice for a majority of road construction activities. As is the case in other countries in the region, this method of construction is supported by tractor-towed equipment, albeit to a limited extent. The lack of availability of even modest levels of equipment is a constraint on the local contractors, and they face difficulties in trying to access equipment (via lease) and/or trying to arrange loans for its purchase. The lack of access to equipment affects all sections of the industry and is a limiting factor in the development of the LCRI.

In addition, specific issues faced during the initial stages of the project was one of lack of continuous work for the contractors, together with an absence of more challenging work activities or contracts to facilitate their individual development. Similarly, payments were often slow in being made to the contractors once the works were completed. This caused operational problems for the new entities and their personnel. These issues were recognised by DNEP and, with the assistance of the CDT advisers, long-term (12 month) road maintenance contracts have been developed for the local contractors. These are level-of-service based and individual contractors are made responsible for all maintenance over a full year on a single section of road. At the same time, a monitoring programme has been introduced to assess each of the contractors against specific task-wise performance indicators in order to rate their progressive development on a monthly basis. Overall, it is envisaged that contractors should be ready to participate in competitive bidding for road maintenance contracts once they have successfully completed (with at least 'satisfactory' ratings) routine and periodic maintenance works on gravel and paved roads.

As of the end of 1998, the CDT Project is working with almost 50 local contractors throughout Mozambique, with many of them approaching the point where they should be ready to compete on future DNEP contracts (and for other local clients). One of the local emergent companies has already submitted a bid in the competitive market, with mentoring provided by the CDT advisers. In order to develop a voice and representation to clients and within the developing local industry, the local contractors have organised themselves into a Contractors Association. This should assist with issues affecting their businesses; in particular on contracts, payments, credit-

ratings with the banks, access to equipment and spare parts, etc.

Conclusions

The CDT consultancy assignment is due to end in mid-1999, and the sustainability of the LRCI will now be reliant on the relationships developed between the contractors, DNEP and the Provincial authorities, together with the Contractors Association and the focus it can bring to the continuing issues. However, the market for road contractors' services in Mozambique is strong; with DNEP directly, the Municipalities, foreign donor-sponsored roads projects, and also with the private sector now being involved in road building on a BOT basis.

The future for the emergent contractors in Mozambique looks promising, with so much infrastructure renovation, re-building and its maintenance still to be undertaken. The CDT Project has provided the mentoring, training and continuous monitoring of road maintenance contracts and local contractors over a two-year period on behalf of DNEP. The transition to a locally-controlled and administered LRCI is likely to be challenging, particularly in the initial stages, but the CDT advisers will be leaving behind the procedures and reference materials for counterpart government staff and the local contractors. Much remains to be done, but the Mozambican private and public sectors are demonstrating the will and capability-despite limited resources – to assume the role of contractor and client, respectively, for the benefit of the Republic of Mozambique. ▯

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Experience in contractor development programmes

Contractor development programmes for the road sector in Sub-Saharan Africa (e.g. in Ghana, Lesotho, Uganda, Zambia, and Zimbabwe among others) have nearly all been supply-driven. The government, in collaboration with donor agencies, have proactively trained contractors. The opposite approach to contractor development is demand-driven, i.e. the government adopts a policy to open up the market and remove barriers preventing emerging contractors from entering the market.

Access to work and reserved market for citizen contractors

Legislated reservation of certain work for a particular group, e.g. small-scale citizen contractors, can have positive or negative results, depending on the environment. For example, if foreign companies dominate the local contracting industry, reservation of part of the work may help the citizen contractors to have a share of the market. However, if the domestic industry lacks capacity and there is poor enforcement of such a policy it is possible to have 'fronting' by non citizens who 'use' citizens in order to access work that is reserved for citizens.

Contractor's access to resources

For small contractors to develop they need access to credit, equipment and human resources. The government can play a role, for example, by guaranteeing work availability in order to help reduce collateral requirements from contractors wishing to borrow funds from credit institutions. Human resources may be accessed from the market, if available, or may need to be developed.

Contract packaging and capacity building of small-scale contractors

In many developing countries there is a skewed distribution of projects, which sees the big international contractors getting most of the work. The government, as the main client in most cases, should ensure work is available across the whole spectrum of contractor categories. Small-scale contractors' access to work can be increased by subdivision of large projects into smaller sections, and by use of small-scale contractors as subcontractors for activities that they can do. Joint ventures and consortiums could also be vehicles of capacity building of small-scale contractors, if fairly structured.

Targeted procurement

Targeted procurement is a system of tender adjudication which replaces the practice of awarding the tender to the lowest priced offer, as it permits socio-economic objective offers (e.g. use of labour-based technology) to be considered together with the financial offer. Such schemes have been used in a number of countries to address various imbalances, such as access to resources by people of a certain gender or entrepreneurial status, (e.g. small-scale contractors) marginalised communities etc. In South Africa, it was used primarily to implement an Affirmative Action Policy aimed at eradicating the legacy of apartheid by bringing 'Previously Disadvantaged Groups' into the mainstream of the economy. Targeted procurement needs to be monitored and enforced, if it is to be effective.

Tendering procedures and incentives

Small contractors may need assistance with training in tendering procedures and relaxation of sureties and performance bonds, in view of the relatively small value of their work. They could also be offered incentives such as mentorship schemes, or subsidies on fees to engage professional advice of consultants. Depending on the level of development of the contractors, it may be necessary to award contracts based on set, negotiated, or competitive rates.

Contract documentation

A number of countries use FIDIC and other contract documents biased towards large-scale or international contractors. Most small-scale contractors have neither skilled staff to interpret these documents nor the resources to procure the services of consultants. It is important to simplify contract documents for small contractors.

This can be best achieved by using a recognised contract as a basis for developing a simplified one. A good contract document should protect the client on the right price and right delivery time and quality. It should also protect the workers, ensuring proper conditions of work, for example, regarding health and safety. Also, it should protect the contractor, facilitate negotiation and ensure payment on time. A conflict resolu-

tion mechanism with a short time frame should be put in place.

Fiscal regime

Tax 'holidays' and tax concessions, for example relaxation of import duty on capital investment, have been used in a number of countries to assist emergent contractors. In some countries, the construction industry pays a training levy to assist with human resource development. In other countries, subsidies have been put in place in the form of easily accessible revolving funds, to assist small-scale contractors with, for example, purchase of equipment and to provide working capital. The success or failure of tax concessions, levies and subsidies is usually governed by how they are administered.

Contractor's associations and government legislation issues

Contractor associations play an important role for their members particularly in;

- negotiating and monitoring effective payment systems
- accessing credit
- ensuring access to fair and transparent bidding processes
- strengthening contractors' negotiating power with governments and clients.

Client financial systems

Sustainable funding is crucial for the development of contractors. The funds should also be secure, that is, not subject to reallocation to other sectors after the budget has been approved. 'Raiding' of the funds can adversely affect contractors who will have made investments based on the perceived market.

Small contractors are vulnerable to delays in payment, as they tend to have limited working capital. Most of them are afraid to seek compensation for delayed payment, especially where the government is their main client. The main reason is that they find it risky to be seen to be 'biting the hand that feeds them'. In the Namibia White Paper for Labour Based Works, one of the policy statements stipulates that the contracts should include a specified period after which interest at bank overdraft rate will be automatically paid to suppliers/service providers/ contractors in respect of overdue payment. This is indeed a bold step worth emulating. Another positive step could be reducing the payment period from the usual 30 days to 14 days after submission of a payment certificate. Decentralising payment systems can also benefit small contractors.

Client management systems

For the small contractors to have continuous access to work, the client management systems should be geared toward small contracts, have supervision capacity (either in-house or outsourced) and ability to make timely payment. Experience shows that the management capacity of the client organisation is generally weak and needs to be developed alongside the development of contractors. Furthermore, for the client staff to offer good service, they should be motivated by good remuneration, career prospects and adequate staffing levels.

Public Sector - Private Sector Consultative Forum

It is important to have a private sector-public sector forum, where the two parties can discuss issues of mutual concern. This is particularly important when the government develops policy, so that it will take on board issues that impact on the private sector.

Labour Issues

It is important to consider labour issues such as fair wage rates, equal opportunities, minimum age limits etc. For example, wage setting mechanisms for casual labour should be in place. In most countries, the Government sets the minimum wage for casual labour. This tends to be the *de facto* wage paid to casual labour. Labour clauses may be incorporated into contract documents. Mechanisms of enforcement could include termination of contract, financial penalties and exclusion from future bidding for defaulters.

Conclusion

Small-scale contractors, like babies, should be assisted to come into the world, to learn to stand and walk and thereafter, be gradually left to fend for themselves. ▯

Institutionalisation

By Terje Tessem, ILO/ASIST, Harare

ASIST is now in its third phase. The present programme has been funded up to June 2000. As a part of the mandate worked out by the partner countries and the donor agencies, ASIST has been tasked to look at ways and means for the institutionalisation of its services. Albeit a very heavy word, ASIST has started analysing how to closely work with agencies and institutions (private, non-governmental, government institutions) to ensure that parts of the work of ASIST will be included under other agencies' responsibility in the future.

We are therefore through the Bulletin requesting interested partners to notify us of their interest in providing the type of services ASIST is offering (please refer to page two on the work of ASIST). What we need is an expressed interest in what you would be able to carry out (type of service and coverage), to what extent is the proposal built on an understanding and knowledge of labour-based technology, to what degree has the company (or the individuals) been working on similar subjects in developing countries, etc.

This is not a proper tender process, but rather an input to the assessment of the future of ASIST beyond year 2000. We want to see that the labour-based technology and employment-intensive investments are provided with the right vehicles for the next millennium.

If you are interested in discussing your, or your institution's, capacities and interest, please contact ASIST for further information on the type of services and future requirements linked to these services. We would be very happy if you could provide us with a write-up of what you would like to do. ▯

Regional seminar for labour-based practitioners

By Terje Tessem, ILO/ASIST, Harare

Regional Seminars for Labour-based Practitioners have been organised in six different countries around Africa since the first one in 1988. These include Tanzania, Zimbabwe, Lesotho, South Africa, Ghana and Uganda. The seventh seminar was held in Lusaka, Zambia on 3 - 7 May 1999. The host of the seminar was the Ministry of Works and Supplies, supported by a Steering Committee with participants from a wider group of labour-based partners in Zambia.

Zambia had been selected by the participants of the previous seminar in Uganda as the most attractive country to visit. The Zambians not only sold their labour-based technology development work well at the previous seminar, they also displayed the splashing waters of Victoria Falls as a possible target for side visits during the stay in Zambia. Both are impressive and it is hard to tell which was the decisive factor for participants choosing Zambia!

The theme of the seminar was "Contracting in Employment-Intensive Works". The number of countries embarking upon Employment-Intensive Programmes has grown steadily over the years. Contracting features as an important development objective in most of the countries. An impressive number of 185 participants took part in the seminar.

This is of course not surprising as lending agencies and governments have moved rapidly in this direction, in particular in the road sector, but also for other sectors like for urban works. Globalisation of the economy and international influences on the operational strategies have led people in many countries to initiate programmes in support of privatisation strategies.

The privatisation drive poses new challenges to communities and governments in many countries where private sector has not been used to a large extent in infrastructure provision. Introducing private operators has, at least initially, meant using larger international companies with little knowledge and competence in appropriate technology.

It is evident that these programmes could make a much more substantial contribution to employment creation and poverty reduction. Infrastructure investment programmes implemented without the necessary local capacities, either available or developed to the needs of the programmes, may in the best case be neutral. In the worst case they may even have a negative influence on poverty; we may end up with an expensive and high quality infrastructure with no capacity to maintain it and a heavy loan to service by the country.

An optimal use of local resources, including labour, skills, materials, finance, etc., must be established to make sure that the national economy and the target populations benefit the most. It may sound obvious that this should happen, but the negative scenario has unfortunately been the case in many countries supported by the said agencies. A change of this situation will in most cases only happen if major investments are made in capacity building at local and national levels, both with the public and private sector.

In order to have any substantial impact on the social and economic development for a majority of people in a country, it is very clear that the infrastructure investments must not be a goal in itself. This does not make sense even if the infrastructure is built by labour-based methods. It is the provision of social and economic services that make people take advantage of the investments; it provides a string or rope to enable people to pull themselves out of poverty. The infrastructure is thus only a facilitator in providing the priority services for people most in need of it. The emphasis on social (health, education, etc.) as much as on economic (roads, markets, etc.) infrastructure is very clear, and it reflects the fact that, for instance, good health and education are prerequisites for a development path out of poverty.

Photo by ILO/ASIST

Participants of 7th Regional Seminar held in Lusaka on site visit to footbridge over river Ngwerere, Lusaka

It was against this background that the theme of employment-intensive contracting had been chosen. Contracting encompasses much more than a contractor and a client building a road. The trend in Employment-Intensive Programmes shows that it is the holistic approach to development that is at the forefront. This means that contracting in rural and urban infrastructure includes the full participation of people in identification, planning, implementation and operation of the infrastructure. Interesting methodologies for these operations both in the rural and urban environments were presented and discussed during the seminar. Subjects included in the seminar were:

- stakeholder participation in the design, planning, construction, operation and maintenance of infrastructure;
- appropriate contract documentation and procedures;
- appropriate investments for contractors (equipment, staffing and training);
- credit facilities for local contractors;
- sustainability, growth and diversification of contractors;
- contract management and supervision: the role of the client and consultant;
- the role of contractor and client associations;
- community contracting in an urban setting;
- labour policies and practices under contracting;
- building local capacity for the development and management of Intermediate Means of Transport.

The above issues were presented in plenary and groups. Both the papers and proceedings from the group discussions and plenary are available from ASIST informations Service on request.

Representatives from the 'primary target group' of the contractor development programmes, the contractors, were also present during the seminar. Although new associations have been formed in a number of countries, the session on the need for and the usefulness of contractor associations indicated that further information and development is necessary to enable contractors and clients alike to comprehend the potential role of associations in labour-based programmes.

Photo by ILO/ASIST

Upgrading of Chainda settlement, labour-based road rehabilitation works, Lusaka

It was also somewhat disappointing to notice the apparent reluctance among participants to seriously consider labour policy issues as crucial in the development of new programmes. However, this does well justify the need for the Labour Policies and Practices Guide, which has been developed by the ILO. It will be crucial to develop a dialogue with the social partners to explore ways and means for the promotion of the principles of the Guide.

The seminar organisers had put together a varied and interesting field visit programme. The three different sites provided good examples of work in the three main sectors covered by the seminar.

The labour-based routine maintenance contracts on the highway outside Lusaka showed how appropriate contractors could be engaged on a performance contract (service-level). Although the contracts have just started on these sections, earlier experience in Zambia indicated very favourable and interesting professional solutions to routine maintenance operations.

Rural access interventions were the focuses on the second 'station' on the field trip. Spot improvement techniques to an access road with a number of alternative drainage structures and water crossings were displayed. Locally manufactured equipment including the famous eccentric dead-weight rollers and tippers were also displayed. These are award-winning pieces of equipment for which further information can be obtained at the RDTS or from ASIST. An exciting footbridge across an adjacent river included different treatments of the wood used in the construction of deck, rails and pillars.

Zambia has had some good experiences countrywide with the upgrading of unplanned settlements. Participants were 'walked' through the Chainda settlement outside Lusaka where the community in partnership with an NGO is making good progress in the development of drainage and access interventions like roads and paths combined with solid waste management interventions.

The Lusaka Regional Seminar was very well organised. This is thanks to the Ministry of Works and Supplies and its Roads Department Training School where the primary responsible persons for the seminar are occupied on a normal basis. The RDTS with Charles Mushota, Daniel Mulonga and Carl Erik Hedström and their colleagues should be proud of this work! ASIST want to thank the Director of Roads in Zambia, Jere Mwila for releasing such competent staff to work on the preparation and handling of this seminar.

The next seminar

The comprehensive and challenging programme (under Social Fund for Development) presented by the Egyptians impressed the seminar participants. It is not clear whether the Egyptians are directly benefiting in their present programmes from the knowledge created many thousand years ago when they built the pyramids by labour-based methods. However, it is clear that this made an impressive contribution to their bid for the next seminar. It was almost unanimously recommended that the Egyptians should host the next Regional Seminar for Labour-based Practitioners. It has been proposed that it will be held in September-October 2000. ▯

Mode and characteristics of local transport and equipment in Cambodia

By G.R. Niraula, Rural Roads Engineer, Cambodia

In Cambodia, especially in rural areas, several kinds of transport and/ equipment run on the red laterite roads. According to a survey carried out recently, the equipment can be classified in four categories.

Light etean trucks

Etean trucks are manufactured in Thailand, especially for agricultural purposes. They were first introduced in 1992 in Cambodia, for an ILO labour-based infrastructure rehabilitation and maintenance project.

In labour-based roadworks applications these trucks are very useful for transportation of hand tools, plate compactors, drums filled with fuel, pedestrian vibratory rollers, water pumps and also traffic signs and posts. They are also used to distribute gravel to individual length-persons, and for spot improvement of roads. The maintenance cost of this equipment is considerably low.

Features of light etean trucks:
- *Price as at March,1999: US$5000*
- *Fuel consumption: 7km/litre (diesel)*
- *Safe working speed: 30 kph*
- *Average economical life span: 7 years*
- *Average load carrying a year: 700 tonne*
- *Spare parts: locally available*
- *Can be used as a water bowser by mounting a litre 2000 tank.*

Medium-size etean trucks

These trucks are assembled in Cambodia and are heavier than those originally manufactured in Thailand. The engine capacity is 18 HP (horse power), the same as light eteans. In ILO labour-based road projects they are being used as water bowsers, with a 5000 litre capacity. In the rural areas they are often used for agricultural purposes such as transporting rice, etc. The load carrying capacity of these trucks is 5 cubic metres. They are often used for transportation of laterite (gravel material), from an average quarry distance of 25-30 km.

Features of medium-size etean trucks:
- *Price as at March,1999: US$5000*
- *Fuel consumption: 7 km/litre (diesel)*
- *Safe working speed: 30 kph*
- *Average economical life span: 7 years*
- *Average load carrying a year: 2800 tonne.*

Heavy duty imported trucks

Two kinds of trucks can be seen in Cambodia:

Manufactured in Thailand in collaboration with Japanese brand names like Hino, Isuzu and Mitsubishi. They have a load carrying capacity of 14-20 cubic metres. These trucks are being used for transportation of materials such as gravel, sand, stone, cement, and agricultural products. Their use for transporting gravel on rural roads is restricted, especially during the rainy season, when the risk of damage is higher.

Features of heavy duty trucks:
- *Price as at March,1999: US$50000*
- *Fuel consumption: 7 km/litre (diesel)*
- *Safe working speed: 40 kph*
- *Average economical life span: 7 to 12 years*
- *Average total load carrying a year: 6000 tonne.*

Imported from Russia: Kamaz. The Kamaz are very popular in Cambodia. The load carrying capacity of these trucks is 7-14 cubic metres. The light 7 cubic metre capacity truck is mainly used in rural road works for transporting materials, especially gravel, sand, stone, cement, steel, etc. The risk of damage is high during the rainsy season, restricting their use in the rural areas.

Features of Kamaz:
- *Price as at March, 1999: US$35000*
- *Fuel consumption: 3 km/litre (petrol) – quite high*
- *Safe working speed: 40 kph*
- *Average economical life span: 7 to 12 years*
- *Average total load carrying a year: 3500 tonne.*

Motorcycle without trailer

Motorcycles in Cambodia are a reliable means of transport for carrying not only passengers, but also goods and livestock (especially pigs). The use of motorcycles as taxis is popular in Cambodia. The average moto-taxi (local name: Motodub) fare per km is about 13 US cents. A 125 cc motorcycle, manufactured in Taiwan, costs around US$700. The average fuel consumption is 25 km/ litre. Together with the bicycle, motorcycles are also affordable, even for labourers working in the rural areas.

Motorcycle with trailer at back

These locally manufactured wooden trailers fixed with motorcycle wheels and pulled by 125 cc motorcycles are a popular mode of transport in Cambodia. The size of trailer is about 3m in length and about one metre in width. The trailers are useful for transportation of goods, materials, agricultural products, etc. They are popularly used as taxis and can be seen in Cambodia's rural areas, where the road conditions are fair enough. In roadworks it is not used except occassionally by labourers going from one village to another. The wooden trailer, with good finishing and painting costs around US$350. The maintenance cost is nominal. ▯

Fair work for fair pay

By David Mason, Senior Technical Adviser, ILO/ASIST, Nairobi

Many of us are so accustomed to using the phrase 'labour-based technology' that we may forget that most people do not know what it means. Even among practitioners, there are differences of opinion about its meaning.

So what do we in ASIST mean by the phrase 'labour-based technology'?

Labour-based technology – what is it?

Labour-based technology is a structured method of providing or maintaining infrastructure to a specified standard, while optimising the use of labour, and employing people with fair working conditions. The use of labour is supplemented with appropriate equipment where necessary for reasons of quality or cost. It is a supervision-intensive system. The term incorporates the idea of optimising the mix of labour and equipment to produce a cost-effective result.

The benefits of labour-based technology

Labour-based technology can be applied to public and community works programmes encompassing rural roads, irrigation, soil conservation, afforestation and urban infrastructure works, and water supplies.

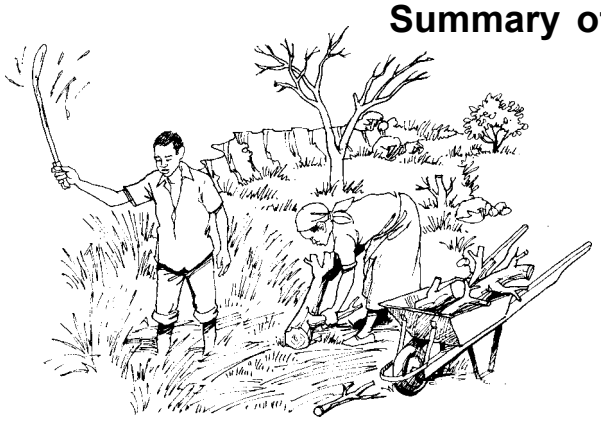
. The use of this technology can result in the creation of direct and indirect benefits to the poorer parts of the population. Examples of these benefits include:

- The creation of jobs in the rural and urban areas where other wage earning opportunities did not exist
- The increased use of local resources, reducing dependency upon imported heavy equipment, fuels, spare parts and lubricants
- The saving of scarce foreign exchange, while channelling money into the local economy
- The acquisition of skills by workers for maintenance of the infrastructure
- The fostering of a sense of ownership on the part of the beneficiaries
- The empowerment of communities in the management of rural and urban infrastructure assets created.

Productivity norms

The following tables present productivity norms for various operations in rural road construction. These norms have been derived from data compiled from countries in Sub-Saharan Africa. Although the data has been collected from road projects, many of the operations are common to other types of infrastructure work. For more detailed information refer to: Stiedl, Brudefors & Shone, *Productivity norms for labour-based construction: Technical brief No. 2.* ILO/ASIST, Nairobi, 1998.

Summary of recommended values



SITE CLEARING

Average productivity by type of cover in m² per worker day

	Dense bush	*Medium*	*Light bush*	*Grubbing*	*De-stumping*
Recommended value	***100***	***200***	***350***	***175***	***By experience***

EXCAVATION

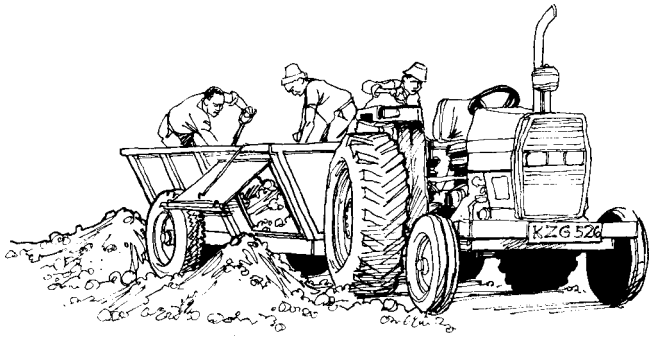
Average productivity by soil classification in m³ per worker day

	Soft	*Medium*	*Hard*	*Very Hard*	*Rock*
Recommended value	***5.0***	***3.5***	***3.0***	***2.0***	***0.8***

WHEELBARROW HAULAGE

Wheelbarrow haulage norms by haul distance in m³ per worker day

	0-20m	*20-40m*	*40-60m*	*60-80m*	*80-100m*	*100-150m*
Recommended value	***8.5***	***7.0***	***6.5***	***5.5***	***5.0***	***4.5***



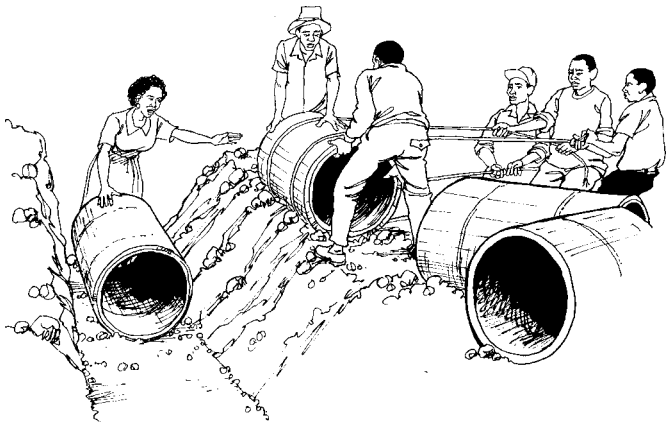
LOADING, UNLOADING AND SPREADING

Average productivity rates in m² per worker day

	Loading	*Unloading*	*Spreading*
Recommended value	***8.5***	***10***	***13.5***

COMPACTION

	Manual compaction *m^3 per worker day*	Equipment compaction *m^2 per roller day*
Recommended value	***9.0***	***700***

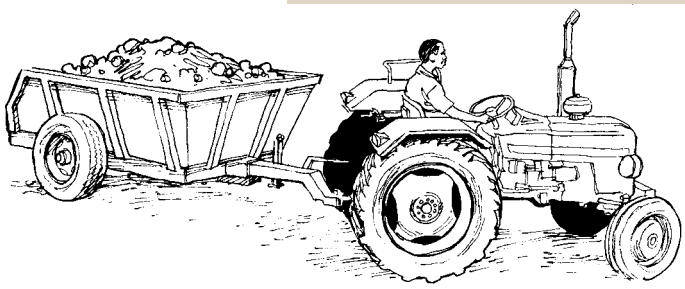


CULVERT LAYING

	Culvert installation *m per worker day*	Concrete *m^3 per worker day*	Masonry *m^3 per worker day*
Recommended value	***0.9***	***1.0***	***1.0***

TYPICAL HAULAGE RATES FOR MANUALLY LOADED EQUIPMENT

Haul route condition	Good					Average					Poor				
Haul distance (km)	2	4	6	8	10	2	4	6	8	10	2	4	6	8	10
Trips per day per truck	22	19	16	11	8	18	15	12	8	6	16	12	10	7	5
Trips per day per tractor/ trailer combination	20	12	8	6	2	18	11	6	5	4	16	9	4	4	3



TYPICAL EQUIPMENT/LABOUR COMBINATIONS FOR GRAVELLING

Haulage distance *km*	Loads per day *unit*	Total volume *Loose m^3*	Excavation *Workers per tractor*	Loading *Workers per tractor*	Un-loading *Workers per tractor*	Spreading *Workers per tractor*
0 to 2	*18*	*54*	*18*	*7*	*6*	*4*
2 to 4	*11*	*33*	*11*	*4*	*4*	*2*
4 to 6	*7*	*21*	*7*	*3*	*2*	*2*
6 to 8	*5*	*15*	*5*	*2*	*2*	*1*
8 to 10	*4*	*12*	*4*	*2*	*1*	*1*

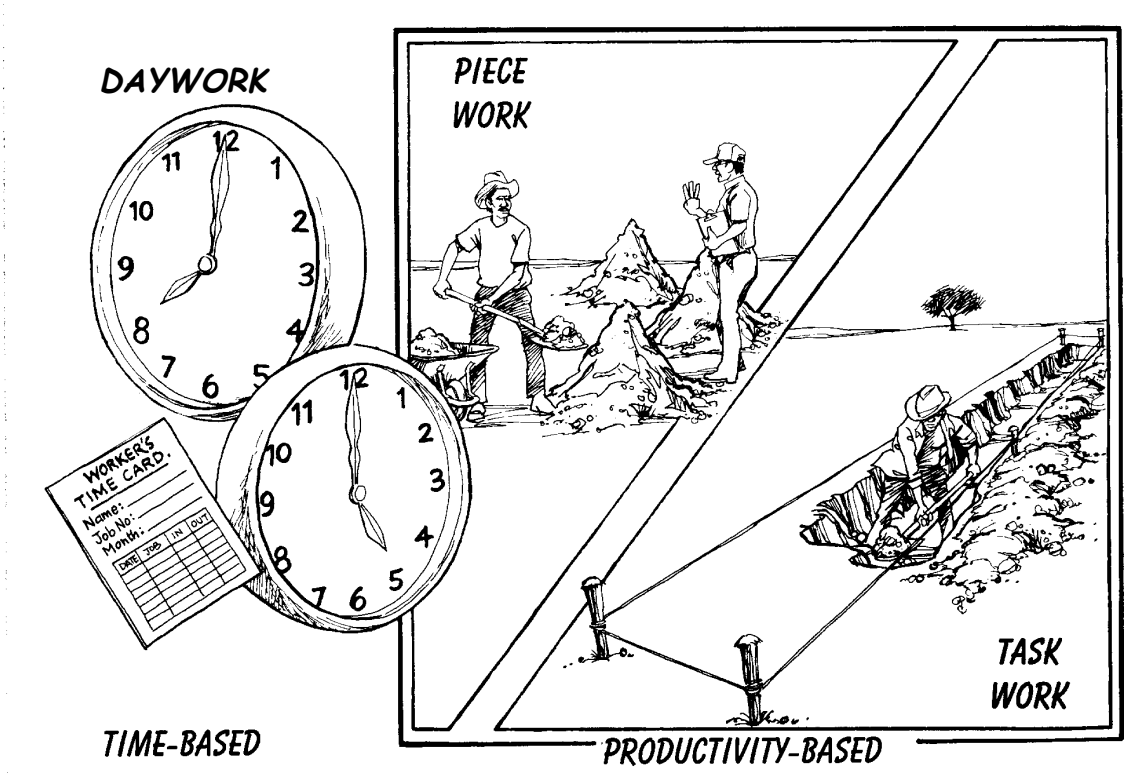
The role of the supervisor

As we noted on the first page of this centrefold, the effective application of LBT requires a high level of supervision. The knowledge and experience of the supervisor is a key factor in applying the technology successfully. In particular, the efficiency with which an activity can be carried out depends to a large extent on how the supervisor apportions the work amongst his or her labour force. In order to get the work done efficiently, the supervisor must first make a judgement about the productivity of the labourers. In the case of excavation, for example, how much material can an individual dig out of the ground in one working day? To make this judgement, the supervisor needs to be aware of:

- the ground conditions
- the health, strength, experience and motivation of the worker
- the type and condition of the tools provided to the worker
- the nature of the general environment (the weather, level of noise, dust, traffic, *etc.*)
- the level of supervision to be provided.

Basis of remuneration

There are three main systems for apportioning work on a labour-based site: daywork, piecework, and taskwork.



Daywork means simply that a worker is paid a fixed rate for being present on a site for a full working day, which is usually eight hours of work[1]. The amount of work produced depends entirely on the supervisor's ability to encourage the worker, and the worker's own motivation and sense of responsibility. In many circumstances this can lead to very low productivity, especially with permanent staff who have no particular incentive to work hard. They know they will be paid (generally very poorly) whether they work or not.

Piecework is a method of setting work, usually preferred by the private sector. The worker is allocated an amount of work for an agreed rate of pay. The work he or she does is measured and the more they do the more they are paid. This approach can give very high productivities, but it can also result in exploitation, especially when the rate for the work is too low. Casual workers are seldom in a good position to negotiate favourable rates. The most dangerous situation is when workers have to put in very long hours to achieve even a subsistence rate of pay.

Taskwork allows a worker to earn a day's pay, while still having time left to go home to do other things. Tasks are generally set to be achievable in 70 per cent of the working day (a working day being assumed as a period of eight hours), but are often completed in 50 per cent of the working day (*i.e.* in four hours). This approach has proved very successful in practice, often doubling the amount of work achieved in a day; and by inference doubling the productivity of the individual worker, as well as halving the costs.

1 In line with the relevant International Labour Standards. See Tajgman & de Veen, *Employment intensive infrastructure programmes: Labour policies and practices.* ILO, Geneva, 1998 for a full explanation of labour standards in relation to labour-based works.

Labour-based contracting: experiences from Ghana

By Annabel Chite, ILO/ASIST, Nairobi

Full-time contractors from Ghana, Mr. Edward Opuku-Mensah, National Chairperson Labour-based Contractors Association, and Mr. Joseph Ebo-Hewton, National Secretary Labour-based Contractors Association, shared their experiences with ASIST during the 7th Regional Seminar for labour-based practitioners, in Lusaka in May, 1999. They have both been involved in the construction industry for more than a decade. The works they have been involved in as contractors include labour-based maintenance and rehabilitation of roads, including bridges, culverts and concrete lining.

Contractors are assisted by the government to procure equipment and credit guarantees. Grants from donor agencies like DANIDA and USAID are utilised, in part to purchase equipment through international competitive bidding. Grants are given to the government of Ghana, and the funds are used to provide loans for the contractors. The Agricultural Development Bank manages the funds and facilitates lending to contractors. Lending rates are negotiated in conjunction with the Ministry of Roads and Transport (the client organisation). The government negotiates the lending rates and guarantees collateral. The contractors pay back the loans over a reasonable period of time. Support to the contractors is very important to ensure their sustainability.

Recruitment of casual workers is done in a structured manner using existing local community channels. Contractors usually go through the local chief, who informs the community about the requirements and nature of work to be done. The information includes amount of remuneration and approximate duration of the work period, etc. The word gets spread around the community such that, when the contractors come to the area, they can begin the selection of workers. The recruitment process is non-discriminatory; a gender balance is maintained. Women are generally assigned tasks like spreading of gravel and distribution of drinking water. The minimum age for recruitment of workers is 18 years.

Supervisors working on the site are usually trained by the Department of Feeder Roads (e.g. by technical advisers on the project). The number and calibre of other staff (e.g. artisans, foremen, and masons), depends on the nature of the work being done. In addition there are permanent staff on board, who manage the running of the office (e.g. office managers, accounts clerks, secretaries and support staff).

Since the inception in April 1998 of the Road Fund Board, contractors are generally paid on time, and payments are regular. The Road Fund Board provides payment for routine maintenance and rehabilitation works.

The contractors felt that the contract documents being used currently are too detailed and involved. It would be advantageous if they could be simplified, possibly taking into consideration input and practical feedback from contractors. In general, FIDIC contract documents are widely used by contractors in Ghana.

The contractors felt that labour-based contracting is a worthwhile venture and it will pay off. It encourages the use of labour-based technology, and also encourages small-scale contractors to grow, and to form contractor associations. They observed that the lives of people in the communities have improved as a result of the application of labour-based technology. In most rural communities it is source of extra income.

To ensure the growth of small-scale contractors there needs to be a continuous collaboration between the contractors, the managing institutions and the client. □□

The contractors were interviewed by Ida Chimedza, ILO/ASIST Harare and Annabel Chite, ILO/ASIST Nairobi, at the 7th Regional Seminar for Labour-based Practitioners, held in Lusaka, Zambia, 3-7 May, 1999.

Asked about their views of the seminar, they responded that they had acquired more knowledge about diversification of contracting, e.g. for building houses, farming and hiring out of equipment. For future seminars they would like to see policy makers invited, so that they can be sensitised on the issues being addressed.

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ASIST Web Site

http//:iloasist.csir.co.za.
Check out our website for past issues of this Bulletin, ASISTDOC, as well as proceedings and papers of Regional Seminars. Soon to come: a News page, and a selection of key documents in full text!

ASISTDOC

The ASIST bibliographic database is available on request for US$25.00 for a one year subscription with quarterly updates. It comes in PC format on two diskettes, together with the user's guide.

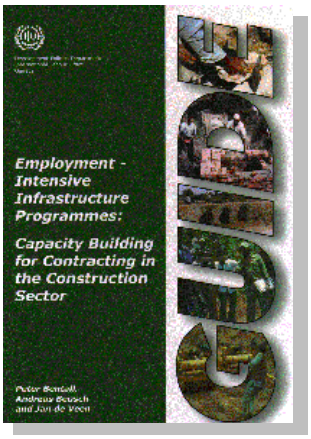
Acknowledgment

We would like to acknowledge the source of the photo on page 6 of ASIST Bulletin no. 8. This photo was provided by Paul Starkey, University of Reading/ ATNESA, United Kingdom. We wish to apologise for this omission.

New publications

Employment-intensive infrastructure programmes: Capacity building for contracting in the construction industry sector

Peter Bentall, Andreas Beusch and Jan de Veen. ILO 1999, 228pp. ISBN 92-2-111581-X. US$25.00



These guidelines describe how large-scale labour-based infrastructure programmes, carried out by contract, should be developed. They discuss aspects essential to their lasting success.

Labour based roadworks technical manual

Ministry of Works , United Republic of Tanzania. Intech Associates, May 1997. US$63.00 (set of three volumes)

Volume I: Road rehabilitation works. 320pp.

This volume of the manual covers technical and management aspects of road rehabilitation works. The manual sets out the design standards for labour-based roadworks. It describes the techniques, planning and organisation of the various components of the works including earthworks, drainage, erosion protection, structures, and surfacing for paved and unpaved roads.

Volume II: Road Maintenance. 285pp.

This volume of the manual covers technical and management aspects of road maintenance works. The manual describes the various emergency, routine, and periodic maintenance operations and the options for organising the works. It also provides practical guidelines on selected maintenance management issues.

Volume III: Design and specifications. 83pp.

This volume of the manual covers designs and technical specifications for the important items commonly used for labour-based roadworks. This includes accommodation and site facilities, handtools, control and setting out tools, and a range of intermediate equipment items. It is intended that the designs and specifications will encourage local fabrication or manufacture to the standards necessary to ensure cost-effective ownership by contractors, road authorities or other organisations engaged in roadworks. Standard designs for culverts and road signs are also included.

Community contracts in urban infrastructure works: Practical lessons from experience.

Jane Tournée and Wilma van Esch. ILO/ASIST, 54pp. US$6.00

A draft working paper on contracting is now available. The guide provides guidance on how to set up a system in which a community group is the contractor for urban infrastructure works in low-income settlements. Comments are welcome. ▯

Materials selection and quality assurance for labour-based unsealed roads

By Gama Sibanda, ILO/ASIST, Harare

Many countries in Sub-Saharan Africa have centralised laboratories for road material approval. These laboratories are usually located in capitals and, at best, in provincial capitals which tend to be far from rural road construction sites. Usually, due to transport delays and workload, test results on soil samples sent from rural road construction sites are returned late to site. Consequently, some roadworks commence before the results are known. Similarly, for quality assurance on rehabilitated or constructed sections of the road, results may also be known long after the work has been completed, making reworking of a failed section practically difficult.

Most labour-based projects utilise the tractor-trailer combination for gravel haulage. International experience has shown this type of equipment to be economic within a 10 km haulage distance. This necessitates use of relatively more (number), but smaller (quantity), gravel pits compared to when using equipment such as tippers, which is suited to longer haulage distances. Use of many gravel pits generally implies use of material of varying (non homogenous) properties. This makes it imperative to use simple and reliable field materials selection, testing and quality control procedures.

Traditional methods do not lend themselves to site testing, due to the financial and logistical constraints facing many developing countries. Following an investigative assignment for ILO/ASIST, the CSIR of South Africa, has developed a soils testing kit which can be used on site. The kit comes in three options. The main difference between the various options is the apparatus that is in the kit. The option for use on unsealed roads comprises two boxes that can be carried in the back of a pickup. The boxes contain apparatus for measuring various parameters, such as compacted material strength, material grading, aggregate strength, and plasticity properties.

ILO/ASIST has published a technical brief which complements the CSIR soils testing kit. The brief is divided into two parts, one dealing with the theoretical background to various tests and the other offering practical guidance for carrying out the tests. The Zimbabwe Department of Roads, in collaboration with ILO/ASIST, has recently commissioned a three month study to test the suitability of the equipment in the kits and the reliability of the results when compared to central laboratory testing. ▯

EIP news

By Jan de Veen, ILO/POLDEV, Geneva

Universities

The coordinator of the recently established Asian Universities network (Dr. Danang Parikesit of Gadjan Mada University, Yogyakarta) visited POLDEV in Geneva on 24 June. Linking this visit to Geneva to a course he attended in Vienna, Danang could meet those POLDEV professionals with interests in the field of transport planning, Small and Medium-scale Enterprise development, and employment, and collect relevant information material and publications for his work in Indonesia.

Asia

Two Associate Experts from the Netherlands will join the LBAT (Labour Based Appropriate Technology) roads and irrigation project in Cambodia to work on the establishment of Integrated Rural Accessibility Planning (IRAP) procedures that will be fully integrated into the project.

Europe

A joint UN inter-agency need assessment mission was carried out to the Federal Republic of Yugoslavia (including Kosovo) to assess the post-conflict emergency aid and rehabilitation possibilities. An ILO Balkan Task Force was established, in which Eric de Vries represents the EIP. The Task Force will concentrate on employment and income generating projects. The geographic competence of this Task Force would be limited to the Federal Republic of Yugoslavia (with emphasis on Kosovo), Albania and Macedonia. The EIP component of the Task Force will form part of an overall ILO programme design and project document to promote employment-intensive programmes and the creation of Local Economic Development Agencies.

West Africa

Alternative (including national) funding possibilities for the 'ACTIF' project (Appuis et Conseils aux Travaux d'Infrastructure et Formation pour l'Emploi et l'Entreprise en Afrique, the equivalent of an ASIST type programme) is being examined. The World Bank 1999/2000 budgets for the different countries involved are likely to be sourced for this purpose.

Within the framework of this project a package of training materials is being developed in French to be published at the end of 1999. This material consists of six parts: (i) roads, (ii) urban works, (iii) construction, (iv) organisation of tendering and preparation for bidding, (v) training of small contractors in personnel, finance and site management, and (vi) training of trainers.

Madagascar

A new series of training manuals was formally presented to the Minister of Public Works during a ceremony organized in Antanarivo. The manuals are in French and are directed at (i) the managers of small enterprises dealing with employment-intensive roadworks, (ii) contractor's supervisory staff, (iii) local consultants, and (iv) maintenance contract supervisors. Two volumes present a typical tender for employment-intensive roadworks and a computerized planning and monitoring system for this category of work, respectively.

Latin America

A seven months project on post-'Mitch' (the hurricane that devastated several countries in this region) reconstruction works in Nicaragua will start in the autumn of 1999. Its objective is to assess and mobilize capacity for the use of employment generating technologies for this work. An umbrella follow-up project for post-Mitch reconstruction in Central America has been developed and will be presented to a donor meeting in Madrid in October 1999. This project will aim to stimulate employment and local economic development through the use of local resources, in particular labour, in 'post-mitch' Programmes

Publications

A new brochure on the Employment-Intensive Programme has been published in English and French. A Spanish version will be published in July.

Staffing

In June Martin van Vaals will terminate his assignment as EIP specialist within the MDT in Lima. He will be replaced by a local expert. ▯

correction correction correction

Regretably, in the last issue of the ASIST Bulletin No. 8, in the article by Doris Chingozho, entitled *Reducing the transport burden: Women and rural transport,* the third paragraph on page 6 was wrongly edited,

The paragraph should read as follows: *The gender impacts of IMTs have been substantial enough to warrant further efforts in this direction. Women in areas where IMTs have been disseminated are positive about the impact of the transport devices, although access and degree of benefits is not always equal. Statistics from Chiota in Mashonaland East Province of Zimbabwe is one area where only a few households had IMTs made using the technology promoted by ITDG. For instance out of the 27 households surveyed only one household was found with IMTs promoted by ITDG. Most of the households interviewed (66%) expressed that the transport devices were not gender sensitive. This shows that the views expressed by people who have made use of these technologies differ from those who have not been exposed to these IMTs. The evidence from Chivi and Nyanga…* (please see the rest of the paragraph in the article).

We apologise to the author Doris Chingozho of ITDG Harare for the error. ▯

Diary of forthcoming events

Conferences, seminars and workshops

Urban: *Integrated Development for Water Supply and Sanitation Conference,* 30 August–3 September, 1999, Addis Ababa, Ethiopia, WEDC and Organising Committee, (Ministry of Water Resources, Ministry of Health, Christian Relief and Development Association and UNICEF). Contact: Prof. John Pickford, WEDC, Loughborough University, LE11 3TU, UK.
Tel: +44-1509-222390,
Fax: +44-1509-211079.
Email: j.a.pickford@iboro.ac.uk
or Mr. Getachew Alem, Catholic Relief Services, PO Box 30361, Addis Ababa, Ethiopia.
Tel: +251-1-65359194,
Fax: +251-1-654450.
Email: crs@telecom.net.et

Training courses 1999–2000

Kisii Training Centre

Roads: *International Engineers Course,* 11 October–20 November, 1999, Kisii Training Centre, Kisii, Kenya. Fee: US$ 5900, includes accommodation, meals, training and course notes.

For the above course contact: The Resident Instructor, PO Box 2254, Kisii, Kenya. Tel/Fax: +254-381-30699. Email: KTC@form-net.com

Esami courses

Roads: *Road Maintenance Planning and Management,* 1 November –3 December, 1999, Arusha, Tanzania.
General: *Management of Micro-Financing Programmes for Poverty Alleviation,* 22 November–10 December 1999.

For the above ESAMI courses contact: The Admissions Officer, ESAMI, PO Box 3030, Arusha, Tanzania.
Tel: +255-57-8383/8,
Fax: +255-57-8285/8386.
Email: ESAMI_ARUSHA@habariCo.ltd

Transport Research Laboratory roads and transport courses

Roads: *The Managing and Financing of Rural Transport,* 15–26 November, 1999. Pretoria, South Africa. Fee: £3,200, includes accommodation, meals, notes, transport, social activities and certificate. Contact: Course Director, International Development Unit, TRL.
Fax: +44-1344-770356.
Email: international_enquiries@trl.co.uk

IHS course

Urban: 3 month course offered by the Institute for Housing and Urban Development studies: *Urban Poverty Reduction and Urban Infastructure,* 19 January–19 April, 2000, *Urban Environmental Managment, Inner-City Revitalisation and Urban Renewal,* 3 May–August, 2000. Tuition fee: NLG 12,000 and estimated living costs is NLG 6,500. Contact: Institute of Housing and Urban Development (IHS) P&M Bureau, PO Box 1935, 3000 BX Rotterdam, The Netherlands.
Tel: +31-10-402-1550/404-5671
Email: admission@ihs.nl

Management development foundation course

General: *Institutional Strengthening of Local Government,* 13–17 September, 1999, Management for Development Foundation.
Fee: NLG 3,500.
Contact: Training Co-ordinator, PO Box 430, 6710 BK Ede, The Netherlands.
Tel: +31-318-650060,
Fax: +31-318-614503.
Email: mdf@mdf.nl

Intech Associates course

Contracting: *Management of Labour-Based Contract Roadwork*, 31 January–11 February, 2000. Intech Associates/Department of Roads, Harare, Zimbabwe. Fee US$ 3900, includes all tuition, materials, documentation, accommodation, meals, site visits and local transport. Contact: Mr Andreas Beusch, Intech Beusch and Co., Loestrasse 77, 7000 Chur, Switzerland. Tel: +41-81-353-7975,
Fax: +41-81-353-7976.
Email: abeusch@spin.ch

University of Bradford

General: *Poverty Alleviation Projects and Programmes,* 20 September–29 October 1999. Contact: The Course Director, Poverty Alleviation, Development and Project Planning Centre, University of Bradford.
Tel: +44-1274-235267
Fax: +44-1274-235280/233981
Email: h.jalilian@bradford.ac.uk

Courses conducted on request

The following institutions offer various courses conducted on request. For more information contact:

International Training of Trainers course, ***Kisii Training Centre.*** The Resident Instructor, PO Box 2254, Kisii, Kenya. Tel/Fax: +254-381-30699. Email: KTC@form-net.com

Hannetjie Louw, ***Chartered Institute of Transport Southern Africa (CITSA).***
Tel: +27-11-489-2085

The Co-ordinator, Continuing Education, ***University College of Lands and Architectural Studies (UCLAS).***
PO Box 35176, Dar es Salaam, Tanzania.
Tel: +255-51-75004/71853/71272/72291
Fax: +255-51-75448/75479.
E-mail: ihsbr@ud.co.tz

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Fax: +44-1234-752559.
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Tomas Sudra, **UNCHS**, Nairobi, Kenya.
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For further information please contact:
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PO Box 60598, Nairobi, Kenya
Tel: +254-2-572555/ 572580
Fax: +254-2-566234
Email: iloasist@iloasist.or.ke

An accredited craft course in Kenya —road building

By Barnabas Ariga, KIHABT, Kenya & Andreas Beusch, Training Consultant, Switzerland

In most developing countries the training for road construction and maintenance workers is not officially accredited. When it comes to training for labour-based projects, whose aim is to fulfil short-term objectives ensuring that the technical personnel are able to operate as quickly as possible, the need for accreditation is essential. This kind of training is traditionally delivered by Government Departments who are (or were) responsible for the road infrastructure of the country. With the current trend to privatise work execution, coupled with the aim of introducing labour-based methods to the private sector, a formalised, appropriate and accredited training scheme becomes even more essential.

For a sustainable countrywide adoption of labour-based work methods in particular and road-building skills in general, the Kenya Institute of Highways and Building Technology (KIHBAT) of the Ministry of Public Works has realised that a Road Construction Craft Course needs to be developed. The Institute has also considered the growing need of the private sector to have access to trained and skilled personnel for roadworks. As a result, KIHABT proposed to the Kenya Institute of Education (KIE) the development of a Road Construction Craft Course. The KIE approved the development of the course curriculum for a national accredited craft course.

The process of developing a national accredited course is lengthy and requires a particular step by step development process as outlined below:

1 Determine the scope and level of the curriculum
2 Obtain approval from all relevant government bodies involved in the development, certification and approval process
3 Liase with potential users of the curriculum, from both private and public sectors
4 Obtain approval from the national examining body. Analyse and compare existing similar curricula.
5 Ascertain what can be borrowed from existing curricula
6 Develop missing links and modules
7 Compile new curriculum to include the borrowed elements
8 Submit the draft curriculum to the Kenya Institute of Education who will:
   - *Facilitate two writing work shops involving potential users and examiners,*
   - *Facilitate subject panels to review individual modules (these are referred to as Subject Specialist Panels),*
   - *Facilitate an editing workshop, for each module.*
9 Submit the final draft product to the course panel, and to the academic board.
10 Submit the final curriculum to the board of directors for approval and release.
11 Inform all relevant institutions and the national examining body.

The durartion of the course is three years. It deals with materials and equipment management, design and drawing skills, public and private sector enterprises, administration and monitoring, and the utilisation of labour-based and equipment-based techniques. The training is open to school-leavers who meet the minimum entry requirements, and to staff currently working for the various government and road agencies. At the end of the course, successful candidates receive a nationally accredited certificate that enables them to work as a Site Supervisor on any road work site in the country, whether equipment- or labour-based and whether for the government or the private sector. Those who would like to continue their academic career could, after successful completion of the craft course, join diploma courses in civil engineering provided they meet the entry requirements.

It is planned that in January of the new Millennium, KIHABT will run the first Road Construction Craft Course – another reason to celebrate! ▯

Training course for engineers and planners in urban upgrading

1-12 November, 1999, University College of Lands and Architectural Studies (UCLAS), Dar es Salaam.

By Jan Fransen, ILO/ASIST, Nairobi

Are you an Engineer or Planner working in urban low-income settlements for a municipality, consultant, contractor, NGO or donor? ILO/ASIST and UCLAS, with contracted help from two consulting firms, have prepared a course for you entitled '*Sustainable community-managed upgrading of urban low-income settlements using labour-based methods'.*

The two-week course will address the following:

- Life in a congested low-income settlement
- Community participation techniques
- Community contracting
- Working in partnership with community organisations
- Intractable problems: appropriate technical options to improve public infrastructure
- Labour-based technology for urban upgrading
- Contract administration
- Project management

The participative course will include lectures, discussions, case studies and fieldwork, based on experience in identifying, designing, implementing and maintaining public infrastructure in highly congested urban low-income settlements. For those not familiar with labour-based works, a one-week assignment to a labour-based project can be arranged.

The course fee is US$ 2,000, covering tuition, documentation, boarding and lodging. ▯

For more information contact:

Jan Fransen
ILO/ASIST, Nariobi
or
Eng. Kaseva, Technical Support Team, UCLAS
PO Box 35176, Dar es Salaam, Tanzania
Tel: +255-51-75004/75479
Fax: +255-51-75530
Email: m_kaseva@hotmail.com

What's new with ...

...The road sector

By Terje Tessem, ILO/ASIST, Harare

ASIST's support to the road sector programmes follows well known and developed routes. However, there are new elements being researched and developed, both by ASIST and our partners. As far as ASIST is concerned, the available resources in terms of man-/woman-power and funds have to a certain degree limited research work. Despite this you will find an article on material selection and quality control on page 14 of this bulletin. Other work includes two items on appropriate engineering standards and development of local consultants.

A programme of Appropriate Engineering Standards is being developed in partnership with TRL and SweRoad. The expected output of this work are;

i deterioration relationships established for low volume roads;
ii methodologies developed for life cycle costs determination;
iii appropriate engineering standards developed for different categories of tracks and roads in different environments
iv methods established for monitoring the construction quality for compliance with the new appropriate engineering standards.

The work will be undertaken in a number of African countries with support from different donor agencies. We are still analysing in which countries to do the practical work. Interested partner countries and donors are very welcome to announce their interest to ASIST in order to obtain the programme outline and discuss possible collaboration.

An increased part of donor funding is going to decentralised implementing agencies who are trying to cope with both an increased work load and new work methods. It is just right that these agencies are getting access to locally available consultants at affordable costs, and within acceptable mobilisation time and efforts.

ASIST also aims at producing some further guidelines on appropriate support to the development of local level consultants. Initial assessments are being undertaken and a programme will be developed shortly.

Experience within ILO supported programmes and feedback in recent regional meetings have clearly stated that the availability of appropriate consultants is an important factor in designing, monitoring and supervising decentralised labour-based works. Indeed, their existence is a must if local agencies should be capable of shouldering decentralised contracting programmes. ▯

...Rural travel and transport

By Fatemeh Ali Nejadfard, ILO/ASIST, Harare

The key initiatives since the last issue of our Bulletin include the following activities:

A joint research work between DFID in the UK and ASIST on investment prioritisation and local level planning is being carried out. The initial findings of this research were discussed in an expert meeting held in London in April 1999. This study will improve the screening process for district planning of access interventions in rural areas. The proposed planning tool will consider not only the economic aspect of assessing an investment in rural access interventions but also its social and environmental aspects as well. This will be an important tool for local level planners in order to justify allocation of resources for interventions that improve rural access.

A set of eight standard designs for suspension footbridges, ranging from 20 to 160 meters with 20 meters interval, are being developed by ASIST in collaboration with the Government in Zimbabwe. This initiative emerged from what was observed in the field in terms of the demand for such rural infrastructure and the existing poor technical capacity at the local and provincial levels to address the demand. The ultimate goal is to construct a few of these footbridges and develop a guideline for training of district engineers in Zimbabwe and other countries in Sub-Saharan Africa. Six of these suspension footbridges are initially going to be constructed in Zaka and Rushinga districts in Zimbabwe — connecting target communities to markets, clinics, schools and a mining company that employs many people from several communities in the area.

ASIST's collaboration on the rural travel and transport subject with a few universities in the Sub-Saharan Africa is progressing well. The collaboration includes introduction of an introductory course on rural access problems in Africa and key issues and interventions in addressing these problems. ASIST provides the teaching and information materials for these courses and helps the university staff to develop the course module. This introductory course is integrated in one of the on-going courses relevant to rural travel and transport in the interested universities. We encourage departments such as rural and urban planning, rural development, civil engineering, etc, in any university in the region to contact ASIST if they are interested in this introductory course. We will seriously consider their request for assistance. ▯

…Urban sector

By Wilma van Esch, ILO/ASIST, Nairobi

The urban infrastructure component of ASIST has recently been involved in the following activities:

- Technical advice to the Hanna Nassif phase II urban upgrading project in Dar es Salaam on tendering and contracting procedures for community and private contracts; on finalisation of a base line study; and monitoring of the work. On-site training courses have been prepared for contractors, foremen of community and private contractors, engineers and town planners. A study tour has been prepared for policy makers.
- In Kenya policy development support has been provided through the Forum on Urban Poverty Eradication and the Nairobi Informal Settlement Coordinating Committee. The forum is linked to the Office of the President, which has recently launched a National Poverty Eradication Plan.
- Discussions on the project document have been held with all the stakeholders of the Dandora project, and it has been approved by the Nairobi City Council and community organisations. The proposed project will upgrade the low-income settlement, using labour-based and community-managed approaches.
- In response to a request from the Ministry of Local Authorities in Kenya, a study has been carried out in three municipalities to support community-managed and labour-based micro-interventions. It proposes designs, construction methodologies, construction costs and maintenance arrangements for labour-based works such as storm water drainage, a bicycle park, a water tank, and road improvements. The interventions will be locally funded, with minimal external support. ▯

ASIST Asia

By ILO/ASIST Asia-Pacific, Bangkok

Indonesia

ASIST-Asia Pacific secured AusAID Phase 2 funding for the mainstreaming of labour-based technology in the USD1.875 billion annual works programme of the Department of Public Works (DPW) (Roads, water resources and human settlements). The DPW have also informed the World Bank that they wish to use existing World Bank loan funds for the next three year (Phase 3) programme of ILO technical support. The DPW programme aims at more than 600 million person days of employment.

In addition, ASIST-Asia Pacific is also providing advice to BAPPENAS (Planning Ministry) on the design of improved short-term labour-intensive works programmes, funded largely from the World Bank Social Safety Net Loan Programme.

continued overleaf

Support to sustainable Lusaka project

By Tomas Stenström, ILO/ASIST, Harare

The Sustainable Lusaka Programme (SLP) is part of the Sustainable Global Cities Programme which promotes the integration of environmental planning, project implementation, and management activities at the community level in low income settlements. Project implementation activities carried out at community level are intended to create a positive impact on poverty alleviation for disadvantaged communities, and to enhance the overall economic development. It involves communities and all stakeholders of the city in the formulation and implementation of strategies and action plans. It is being implemented by Lusaka City Council and funded by UNDP and Irish Aid.

In December last year ILO received a request for support to the SLP in two of the identified priority areas, namely: enterprise development in relation to solid waste management, and capacity building in community contracting in relation to infrastructure development. To address the above issues, ILO has combined the experience of various programmes and departments (ASIST, Start and Improve Your Business (SIYB), Entrepreneurship and Management Development Branch (ENT/MAN), Policy Development (POLDEV) and ILO Area Offices).

The ILO is about to enter into a one-year agreement with the Government of the Republic of Zambia, worth some US$ 100,000, to provide support to the SLP. A programme formulation mission was conducted in April as part of this agreement. The objective of ILO's involvement in the SLP is to ensure that the main public and private stakeholders have the capacity to deliver basic services such as solid waste management and community infrastructure upgrading in order to improve the living and working conditions in three selected low income settlements in Lusaka.

To achieve this, it is proposed to adopt a technical assistance package that consists of inter-linked training and advisory service customised to the needs of four major target groups. These are: the members of the Resident Development Committees (RDCs) in the settlements, officers in the technical departments in the Lusaka City Council, economic groups at community level and local service providers. A multiplier strategy to reach the communities via training of trainers within existing local service providers will be adopted to ensure sustainability and cost effectiveness. The communities will be mobilised to form economic groups that will be running economic activities related to solid waste management and infrastructure upgrading (in phase 2), through community contracts. The role of the RDC would be to act in the interest of the wider community and supervise the works together with the City Council. The assistance will include review and advice on proposals from the communities, establishing of contracting procedures; as well as monitoring implementation of the works.

In the past, the Lusaka City Council has already given out contracts to upgrade roads in low-income settlements. As it would be time consuming for the Lusaka City Council to manage these micro contracts; the City Council gave out a main contract to an intermediary organisation, the NGO Project Urban Self Help (PUSH). PUSH contracted out the work to the RDCs (mostly verbally), and advised and managed the contracts.

The ILO involvement would be a pilot for future replication and will be part of a wider range of activities developed by SLP in pursuit of its broader programme objectives. ▯

Philippines

Following an ASIST-Asia Pacific initiated national tripartite workshop to debate the wider and improved use of labour-based technology in the construction and infrastructure sector, an Executive Order has been approved by President Estrada to make labour-based, equipment-supported technology (LB-ES), the technology of first choice in the Philippines. A special interministerial oversight committee has been established to realise the new targeted employment creation goals whereby up to 200,000 new full time equivalent jobs could be created in three government departments.

Lao PDR

ASIST-Asia Pacific is actively supporting the development of a rural development strategy and programme which will incorporate the ILO-IRAP local level planning approaches and work methods which enhance employment and income generation development approaches, and which directly address fundamental human rights issues, especially of ethnic minorities.

Nepal

As a result of ASIST-Asia Pacific arrangements, the Institute of Engineering of Tribhuvan University will now establish a special labour-based technology section in its library and a national workshop will be convened to facilitate the year 2000 introduction of labour-based technology into the undergraduate curricula.

This Technical University has the determination to be at the forefront of developments in labour-based technology in the Kingdom of Nepal.

Tokelau Island

At the invitation of UNDP Samoa, ASIST-Asia Pacific has prepared a special labour-based (employment-intensive) programme of environmental protection and management for the tiny Tokelau Island atolls. It is intended that this will become a model project of 'best practice' in environmental management and environmental protection practices for both the natural and living environment. Pacific island nations, especially those vulnerable to climate change and sea level rise, with follow this project with great interest. □

Cambodia: The labour-based rural infrastructure rehabilitation program

By David Salter, CTA, ILO Cambodia

The Labour-Based Appropriate Technology (LBAT) project was one of three projects that constituted the ILO Employment Generation Programme supported initially by the UNDP, as part of the UN's efforts for poverty alleviation in Cambodia. The original project ran from May 1992 until June 1996. On July 1st 1996 all the project resources and responsibilities were transferred to the Labour-based Rural Infrastructure Rehabilitation and Maintenance Project. The principal donors for the project have been the Netherlands, Sida, UNDP and UNHCR.

The aim of the project has been to alleviate rural poverty by generating employment through the construction and maintenance of rural infrastructure. The main activities of the project have been the rehabilitation and maintenance of over 540 kilometres of rural roads, 90 kilometres of irrigation canals and the clearing and cleaning of the environs of the World Heritage site of Angkor Wat. The project has been active in six Cambodian provinces and has generated over three million workdays of employment. More than 250 technical staff from local government departments have been trained in the use of labour-based technology.

In 1994, the project began to collaborate closely with the World Food Programme (WFP) in providing employment opportunities to those affected by emergency situations. Using food as a component of payment for labour, the project assisted many war displaced people, as well as those who were unable to cultivate their land due to mines and other problems. WFP had, by late 1998, contributed partial labour wages for more than two million workdays of employment.

In 1995, the Royal Government of Cambodia (RGC) established the Ministry of Rural Development (MRD), which was given the responsibility for the development of rural roads. The LBAT project has since developed close links to this Ministry. The MRD has developed its own programme of labour-based works for the improvement of rural infrastructure in six provinces in the Southeast of Cambodia, based on the experiences of the ILO project. The ILO project played a key role in preparing the MRD technical staff for its $US31 million Asian Development Bank funded rural infrastructure programme.

In 1996, UNDP incorporated the LBAT project into the multi-sector UNOPS/CARERE development project. Since then the project has focused increasingly on the vital

Rehabilitation and maintenance of irrigation canals

issues of maintenance and the sustainability of the investment in infrastructure. In 1997 the project began to develop a maintenance strategy for rural the road network within the project area, and for future application on a national scale. Counterpart technical staff were trained in inventory methods, traffic count systems and GIS mapping. In 1998 a testing apparatus, and systems for quality control of road surfacing materials, embankment compaction and concrete structures, for use in labour-based contracting were introduced.

The project has worked in close co-operation with other UN organisations, international donors and NGOs in providing expert technical advice, training and assistance to their rural infrastructure programs. It has been successful in introducing many of the relevant International Labour Standards, training and capacity building of local staff in the use of cost-effective labour-based technologies for development of rural infrastructure, which will have long term positive socio-economic impacts in the project's areas of influence.

In 1997, due to political problems, donor funds became increasingly scarce and the project closed at the end of January 1999. The project leaves behind an important and successful legacy. As a result, the Royal Government of Cambodia has adopted LBAT as a key component of the national strategy to address poverty alleviation and develop rural infrastructure.

The 'Upstream Project'

The Technical Assistance to the Labour-Based Rural Infrastructure Works Programme, known as the 'Upstream Project', is funded by Sida and became operational on July 1st, 1998. This three-year project aims to mainstream the LBAT approach into the government's development programme.

The project has four capacity building targets:

(i) Increasing the capacity of the private sector by the training of small-scale contractors to carry out rural infrastructure works using labour-based methods. The project is co-operating with the Asian Development Bank financed Rural Infrastructure Improvement Project (RIIP) to train contractors. Additionally the project is training contractors in the target province of Siem Reap to carry out works funded by the project. In the future it is anticipated that the project will co-operate with the KfW Tertiary Roads Improvement Project for the training of contractors for that project.

(ii) Establishing the Development Engineering Course in the Institute of Technology of Cambodia (ITC) as a core course for engineering students. The ILO has prepared the curricula and is providing technical assistance for the establishment of this course. The course is designed to familiarise engineers with labour-based methods, appropriate equipment and technology options for infrastructure development. In May 1999, the ITC administrative council approved it as a compulsory course for final year civil and rural enigneers.

(iii) Construction and maintenance works using the small-scale contractors in Siem Reap province. The project will experiment with the construction of different types of surfaces to try to find cost effective alternatives to the use of laterite.

(iv) Institutional capacity building: assisting the MRD in formulating policy that places LBAT as the foundation of the rural infrastructure programme. The project is providing training for MRD staff in LBAT field methods and is co-operating with MRD to enhance the effectiveness of other projects in the sector through technical co-operation with those projects.

Summary

Due to the success of the ILO projects in Cambodia, LBAT is now a cornerstone of the RGC's strategy to develop Cambodia. At the opening of the National Assembly for the formation of the new Government in December 1998, in outlining the new Government's strategy and priorities, H.E. Prime Minister Hun Sen referred to LBAT a number of times including "…the Royal Government of Cambodia will pay attention mainly to the utilisation of intensive labour technology, especially the organisation and construction of infrastructure in the rural areas. Through this, we can use the types of resources and local technology, create jobs, and promote rural handicrafts. In case of implementing projects, there should be a link between the utilisation of the capability of government officials, workers and local enterprises". □

Call for Abstracts and Papers

The **WORK Research Centre for Employment Creation and Construcion** presents the First International Conference

WORK 2001

"Employment Creation in Development"

April 2001

The organising committe of the conference cordially invites you to submit an abstract for the conference related to the main theme *Employment Creation in Development*, or to one or more of the following sub-themes identified by the committee. The abstract should be no longer than 300 words, and should be submitted before 31 March 2000.

Conference themes:

- Employment-intensive construction: High-tech or low-tech
- Tourism as an employment generator
- Small-scale contractors
- "Jobless growth"?
- Emergency relief and employment
- Legal and contractual implications
- The controversy: Capital-intensive vs employment-intensive
- Gender and employment creation
- Labour-friendly tools, materials and resources
- Large-scale national employment creation programmes
- Financial and socio-economic cost comparisons in employment creation □

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Thailand news

By Jan Sakko, ASIST Asia-Pacific, Bangkok

Photo by ASIST-AP

Kamphang Saen District, Nakhon Pathom, Thailand: Bamboo reinforced concrete rural road construction using labour-based methods and involving mainly women workers

For many decision-makers in Thai government departments it has taken until early 1999 to realise the importance of setting employment goals in infrastructure work plans. ASIST-AP has initiated technical training programmes with the Ministry of Interior's technical departments (Public Works Department, Department of Accelerated Rural Development, and the Department of Local Administration), and with the Social Fund Office of the Government Savings Bank. These departments are responsible for implementing infrastructure components of the USD480 million World Bank supported Social Investment Programme for Thailand.

Special training programmes for technical staff are implemented with the help of Thai consultants. One government programme targets the construction of 1,400km of bamboo-reinforced concrete village roads. More than 250 engineers of the Public Works Department were trained to increase the percentage of labour in such operations. New opportunities for local employment are still bleak. A large number of irrigation rehabilitation projects, and up to 5,000 community-based projects provide scope for further technical assistance.

A special co-operation between ASIST-Asia Pacific, the Appropriate Technology Association, and a network of engineering experts in Thammasat, Mahanakorn and Chulalongkorn universities is underway. 6,100 community (Tambon) development and administrative officers are bsing trained in promoting labour-based technologies, in community planning and project design. An introductory handbook (in Thai and English) presents labour-based technology (Employment), various types of local infrastructure (Investments), and Planning (IRAP) in an integrated concept.

ASIST-AP undertakes a detailed study on the employment potentials in various infrastructure sectors. The scope of the study is nation wide, and looks into private and public sector practices. Cost-effectiveness and productivity of both labour-based and equipment-based methods are important features. In this important task the co-operation from employers and workers organisations, from university experts, planning and advisory bodies is sought to formulate a comprehensive policy advice for the Government of Thailand.

The World Bank has now invited ASIST-Asia Pacific support for an evaluation of the Social Investment Programme, phase 1, as well as for the design and monitoring of phase 2 in the year 2000. □

Mozambique Feeder Roads Programme

By James Markland, CTA, FRP, Mozambique

The major item of news from Mozambique is the recent approval of the road sector reforms by the Council of Ministers. As a result, a National Road Authority will be established, with a Road Fund and Directorates of National and Regional Roads. The Tertiary Roads Section, home to the Feeder Road Programme, will form part of the Directorate of Regional Roads.

It is anticipated that these reforms will result in the increasing decentralisation to the provinces of the management of Tertiary Roads. Much of the rehabilitation and maintenance of Tertiary Roads is done by small and medium sized provincial contractors using labour-based techniques.

These reforms follow the adoption of a revised road policy document by the Government of Mozambique in mid-1998. The employment of local contractors and consultants and the use of locally produced materials and labour-based techniques are all features of the policy.

Exceptionally heavy rains have caused widespread damage to roads, not least those rehabilitated through the Feeder Road Programme. The province of Inhambane was particularly badly affected, with over 300 km of road being seriously damaged.

Training inputs to the programme have been boosted with the recent arrival of Dave Jennings as Training Adviser, and Sampson Addo-Teye and Aurélio dos Santos as Regional Maintenance and Training Advisers. They will increase the capacity of the project to offer more on-site training and follow-up to contractors. □

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Kenya, Roads 2000 coast

By Arne Engdahl, Coast Province, Kenya

The Minor Roads Coast Programme terminated operations in February 1999 after almost five years, and the long expected Roads2000 Coast Danida project is now about to take off, most likely from the beginning of the Kenya financial year in mid 1999. Training in road condition surveys and contract management for the new project has been carried out recently.

The main purpose of the Roads2000 Coast project is to privatise road construction and maintenance in four districts of the Kenya Coast Province. The project lays emphasis on labour-based activities. As a first step it is intended to develop small-scale routine maintenance contractors based on labour only. Advisory services and training will be provided for a period of two years by a Danida team of three advisers, supplemented by consultants. Additional new construction equipment is not included in the project and several options for the privatisation of the existing equipment (tractors and trailers) will be explored: hire/lease, creation of a rental pool, sell off, etc.

The Kenya Ministry of Public Works & Housing has announced a cut in permanent staff employment this year of 40%, so the time is ripe for development of private enterprises. Some Coast overseers and road inspectors who have substantial technical experience in labour-based road construction and maintenance are eager to start on a small scale, and established contractors, even some based in Nairobi, have expressed interest. Timely payment of contractors is crucial.

A reorganisation of the Kenya road administration has been proposed with the establishment of a Road Board in control of fuel levy funds, which would be directly channeled to the districts and operated by District Works Officers and District Treasuries jointly. This arrangement intends to eliminate some financial bottlenecks in the flow of money from the Ministry of Finance to contractors. Danida will finance the Roads2000 Coast project activities by reimbursement of expenditures through the Ministry of Finance after work is done and paid for, so a fast flow of funds is important.

Another crucial issue is the maintenance of the labour-based focus of the road construction and maintenance operations. The Minor Roads Programme district units were merged mid in 1998 with the regular road sections, which were heavy grading oriented. However, the new district road administrations are largely to be seen as an expansion of the MRPs with motorised grading, and the choice of methods will very much depend on the new District Roads Engineers.

The success of the Roads2000 Programme and the future use of labour-based methods will largely depend on (1) the establishment and survival of small-scale contractors, (2) the inclusion of labour-based operations in the portfolio of medium/larger contractors, and (3) the MoPWH's ability to implement the Strategic Plan for the Kenya Road Sector. The Strategic Plan emphasises the use of labour-based methods wherever feasible. Considering Kenya's firmly established record as a pioneer of labour-based road construction and maintenance, it would be disappointing to witness a fallback to traditional, machine-based methods.

The Year 2000 is approaching fast, but the Roads2000 Coast Project should in spite of bugs have good chances for demonstrating results before the new millennium starts. It should thereby contribute to secure Kenya's position in the field of labour-based road construction and maintenance and, more importantly, contribute to institutional development of the Kenya Roads Department and to a much needed boost of the Kenya Coast economy. □

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 your are interested in being registered in this database, please send your CV to:
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EIP news from West Africa

By Valter Nebuloni, EIP specialist, ILO/EMAS, Dakar

The ILO Multidisciplinary Advisory Team for Sahelian Africa - (EMAS), covers the following countries: Mali, Senegal, Mauritania, Cape Verde, Guinea Conakry, the Gambia, Guinea Bissau, Liberia, and Sierra Leone. In September 1998, an EIP specialist was appointed to cover EIP-related assistance.

In these countries, national strategies and policies increasingly refer to labour-based growth, and poverty alleviation programmes often include an employment-intensive component. The sub-region embraces countries and areas emerging from armed conflicts where labour-based works may offer an immediate answer to reconstruction needs.

There is therefore sufficient scope for ILO services in relation to national efforts for job creation through employment-intensive programmes. In order to effectively respond to the demand for such services, EMAS works in collaboration with a pool of qualified national and international consultants.

Since November 1998 EMAS, in collaboration with the ILO's Development Policies Department (POLDEV), has been actively promoting the establishment of *employment intensive policy units* ('*Cellules HIMO*') within Government structures, which are responsible for the elaboration of national investment plans. These units are meant to provide the Government with sound arguments for orientating the use of national resources towards labour-based investment options. The Governments of *Guinea Conakry*, *Senegal*, and *Mali* expressed their interest in such units, and formulation missions are being organised.

Capacity building is one of the main components of a sub-regional programme ('Appuis et Conseils aux Travaux d'Infrastructure et Formation pour l'Emploi et l'Entreprise en Afrique ACTIF') jointly developed by the ILO and the AFRICATIP network. ACTIF is intended to assist national training programmes focusing on the application of labour-based construction technologies. It targets local entrepreneurs, NGOs and community groups. The funds

for programme implementation remain to be obtained.

The ILO is in the process of organising a trainers' training course in Dakar in collaboration with the AGETIP-Senegal. Similar agencies, as well as selected engineering consultants from other West African countries, will also participate in the course. The ILO will provide the necessary training modules and international instructors.

The MLI/98/M01/NOR:'Mise en valeur des forêts du cercle de Kita par les organisations paysannes' is the third phase of an ILO-assisted forest management project financed by the Norwegian Government and UNDP. This third phase started in July 1998 and is to last five years. The project addresses employment creation and nature conservation concerns in Kita district, Mali. It is implemented with the active participation of local communities and technical agencies staff. It uses a contractual approach to natural resource management. The contract established between a village association and the local administration provides villagers with a direct share of profits from the sale of wood. From the technical standpoint, the contract corresponds to forest management plans approved by the local forestry office. The villagers receive directives concerning methods of cutting and the species to be preserved. The project is handled by a national team backed up by EMAS.

In *Guinea Conakry*, an ILO team has been providing, since 1995, technical assistance to the rural infrastructure development component of the EU-Development Fund (FED) programme for Guinea. Under this component, local labour-based contractors were provided skill development and business opportunities in feeder roads rehabilitation and maintenance. Thirteen local contractors grouped into an association. Their overall working capacity in feeder road rehabilitation is 300km/year. Negotiations are underway for a possible involvement of the ILO in the context of the forthcoming 5-years new phase of the Guinea FED programme.

An ILO-assisted feeder roads spot improvement project in Sierra Leone had to be frozen at the end of 1998 further to a new wave of hostilities in the country. The project forms part of a World Bank emergency programme. The security situation remaining precarious, project operations are still on hold.

An effort is being made at EMAS to develop EIP information materials in French. The work will continue throughout 1999 and entail collaboration with other EIP units. Expected materials include a series of technical sheets ('Fiches HIMO') on various EIP-related aspects, a set of overheads, and a consolidated list of the most relevant EIP publications available in French. ▯

Labour-Based works In Zimbabwe

By Asfaw Kidanu, SweRoad, Harare

The Department of Roads (DoR) has just completed the training of ten small-scale contractors. This is the second and last group of contractors trained under the Labour-Based Contractor Development Programme (LCDP) being carried out by the DoR. The first phase of the programme (in 1997) saw the training and accreditation of ten contractors, out of which eight were subsequently equipped and were given road rehabilitation contracts by the Department.

Five of the ten contractors trained this year were former employees of the DoR, while the rest were selected from the private sector. Almost all of these contractors (from both groups) did not have the necessary resources, i.e., operating capital, plant and know-how (technical and managerial) to be involved in roadworks. These are the common barriers Zimbabwean small entrepreneurs face when entering the construction industry, particularly road construction, and these are major problems the contractor development programme is set out to address.

Zimbabwe has now trained and equipped labour-based contractors with a total capacity of constructing about 350 km of rural feeder roads a year. The first eight contractors have been operational since January 1998 and have managed to rehabilitate about 150 km of road to date, at a cost of Z$250,000 (USD8000) per kilometre. The standard of roads they are producing is seven metres wide with six metres of gravel surface.

The other most important component of the LCDP is the routine maintenance of roads rehabilitated using labour-based methods. Under this component, it is envisaged to develop a routine maintenance contractor capability in all the provinces of Zimbabwe covering a total length of 1400 km. In 1997, a total of 400 km of roads was put under a labour-based routine maintenance system. This number is to be increased by a further 600 km in the current year. The average cost of maintaining these roads is US$150 km/year. Fifty one-person maintenance contractors were trained and engaged in their respective areas to look after a specified section of a road. The average contract size for each contractor is 20 km and about ten labourers are employed by the contractor on a part time basis to execute the daily maintenance work.

The LCDP will run up to the end of 1999 and it is expected that all the physical targets set for the project will have been met by that time. What is not clear is the future of labour-based works beyond the end of the current project. However, the Department of Roads in co-operation with ILO/ASIST is undertaking a study with the aim of expanding labour-based technology into other sectors of the economy. The objective of the study is to assess the future role for labour-based technology for the provision of rural and urban infrastructure, and to develop strategies to accomplish this role. The result of the study will feed into decisions on the future orientation of the public investment programme of the Government and the support from donor countries. ▯

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