



# ASIST

ADVISORY SUPPORT INFORMATION SERVICES AND TRAINING FOR LABOUR BASED PRACTITIONERS

A Programme executed by the Employment-Intensive Investment Branch (EMP/INVEST) of the ILO

## Asist Bulletin No. 4, January 1995

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### EDITORIAL

The Fourth Annual ILO/ASIST Regional Seminar for Labour-Based Practitioners in Sub-Saharan Africa was held at the University of the Witwatersrand in Johannesburg, South Africa, from 16 - 20 January 1995.

A total of 96 people from 17 different countries attended the seminar, the main purpose of which was to bring practitioners together to exchange experiences in the fields of education & training and urban development.

This time around, most of the discussion took place in specialist groups, which proved very fruitful - even though everybody agreed that more time would have been needed to reach concrete results. In the next seminar too, some papers will be allocated to initiate group discussion.

The highlight of the seminar was a site visit to a Soweto Contractor Programme. While the participants weren't exactly expecting to be fired upon, the cleanliness and well-planned layout of the structures definitely came as a pleasant surprise.

A word of advice to those wanting full details of the proceedings: while this Bulletin is dedicated to issues arising out of the Regional Seminar, it has proved impossible to include all the discussions and group work results here. As such, we have opted to summarise some papers besides commissioning articles from specialists in the field of the seminar topics. If you wish to read the seminar papers in detail, you can order the seminar proceedings from Development Policies Branch, International Labour Office, CH-1211 Geneva 22, Switzerland.

The rest of this bulletin is devoted to reviews of current publications and information on what is going on in different countries and projects. There is also a diary of forthcoming events in the fields of training and education, as well as a centre-fold on how to use visualisation techniques to keep your meetings or training sessions, interesting and participants' brains working.

Lastly, we'd like to appeal to you to tell us exactly what you think about the ASIST Bulletins - what you would add, remove or improve - by filling in the enclosed questionnaire. If the very sight of an ASIST Bulletin makes you yawn, tell us that too. But do not forget to say if you like something. The purpose of this publication is not to massage the egos of the editors but to give you, our readers, exactly what you want and need by way of information on labour-based technology

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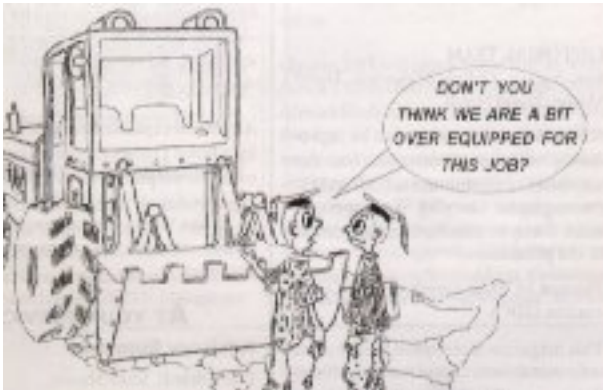
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Back to the future

by *Mike Shone, Senior Technical Adviser, ILO/ALIST*

The adoption of labour-based technology (LBT) as the technology of choice for the National Public Works Programme component of South Africa's visionary and ambitious Reconstruction and Development programme has been motivated as much by considerations of the social benefits of employment creation as by purely technical considerations. But the scope and duration of the programme and the fact that it is taking place in a high labour-cost environment mean that it will be a proving ground for LBT's claims to be a technology for the 21st century. LBT will therefore need to be further developed and managed to a new order of efficiency. Labour will need to be trained in "smart engineering" techniques using local resources and more efficient tools and support equipment to warrant being recognised and elevated inevitably to a new special skilled category.



The Fourth Annual ILO/ALIST Regional Seminar for Labour-Based Practitioners in Sub-Saharan Africa took place at the University of Witwatersrand, Johannesburg, South Africa, in January 1995, just five years before the dawn of the new century.

This was surely a most fitting time and location for a review of current practice and trends in Labour-Based Technology (LBT). The new South Africa, then less than a year old, had just embarked on a visionary and ambitious economic reform strategy known as the Reconstruction and Development Programme (RDP). And reconstruction and development are sorely needed in this new democracy of 43 million people, with its population growth rate of 2.26 % per year and its labour force of 14.8 million. The unemployment rate among blacks is estimated at 37 % compared with only a 9 % rate for whites. Furthermore, 46 % of the blacks live in substandard dwellings (shacks, outbuildings and huts) These are statistics as reported by South Africa to the United Nations World Summit on Social Development in Copenhagen, March 1995.

### **LBT favoured**

An important component of the RDP is the National Public Works Programme (NPWP). The NPWP has adopted LBT, wherever it is technically and economically feasible, as the principal means to accomplish the RDP goals of achieving development in the 21st century while at the same time redressing the inequalities created by the apartheid policies of the past. Mr Siphoshezi, recently appointed Director General of the Department of Public Works, says that this department of some 1600 technical staff will challenge the orthodox way of doing things, developed a strong labour-based ethos within the NPWP and make equipment based methods the exception to the rule.

But South Africa is very different from most other countries in Africa where labour-based works programmes are operational. South Africa has a GDP per capita nearly 25 times that of Mozambique, so it is certainly not among the poorest countries in the region. Daily wages are as high as R40 or USD12 in the formal sector, and R20 or USD 6 in the informal sector. Why then should LBT be the preferred choice of government? What is the value now being placed on the social benefits of creating additional employment? How cost effective will LBT be in South Africa? These and many other questions will be answered as the NPWP picks up momentum.

The South African NPWP is also different from many other LBT programmes in that it is not a separate programme but rather one that aims primarily to redirect public expenditure into infrastructure. It also wants to transform institutional capacity in such a manner that the existing line ministries already involved in infrastructure operation, maintenance and development, modify their operations so as to make them more employment intensive, while at the same time remaining cost effective and competitive with conventional methods.

LBT has therefore become the preferred technology in South Africa. On the basis of the data from the national budget, the total spending on roads, dams, water, sanitation, storm water drainage and the Community Based Public Works Projects (CBPWP) is expected to be around USD 1.1 billion in 1995/96. The current aim is to create more than 140,000 new labour positions by the turn of the century and also to train and develop more than 400 new small, independent labour-based contractors able to undertake as much as 50 % of the labour-based work programme by contract as taken from the draft report of Vocational and Generic Training Planning Team, May 1995.

### **Labour cost vs. Social costs?**



LBT in an environment of relatively high labour costs is a phenomenon currently unique to South African Federation of Civil Engineering Contractors (SAFCEC), who are prepared to discuss current project costs, indicate that certain construction activities now using LB methods are being executed at costs similar to, in some cases even below, those of equivalent works done using equipment methods. While there is very little published material in South Africa giving detailed cost comparisons between LB and equipment based methods, the NPWP position is that there is a strong socio-economic justification for LB methods even where costs are marginally higher than convention.

### **Training challenge**

To realise the RDP's goals, the training and sensitising of key personnel to design, manage and supervise these works will be crucial so as to ensure quality works and cost competitive techniques - which will in turn ensure general acceptance by the construction industry, certain quarters of which are

understandably reluctant to change from existing tried and proven practices and work methods. At the request of the NPWP task team, ILO/ALIST and ILO/SAMAT have been assisting in training needs assessment and identification of training programmes for the RDP. This is an ongoing process and in November 1995, a study tour group from South Africa will visit Kisii Training Centre as a forerunner to further training arrangements.

Clearly, LBT will play a major role in South Africa's RDP; indeed, in many ways South Africa is likely to be a pioneer in establishing the type of LB programmes that will be implemented elsewhere in the 21st century wherever there is a proper understanding of the potential of LBT and a strong commitment to placing employment-creation high on the political agenda. The present consultative process in South Africa, involving as it does a "Framework Agreement" or compact between trade unions, employers and government, also establishes a model for negotiating remuneration packages for LB workers that is suitable for replication elsewhere.

### **Smart engineering**

The claims of LBT to be a technology for 21st century will indeed be tried and tested in South Africa in the civil construction and building sectors, in both urban and rural environments. For the South African RDP to be successful, LBT will however need to be further developed and managed to a new order of efficiency. The notion of labour as simply an unskilled resource will no longer be good enough on successful LB projects. Labour will need to be trained in "smart engineering" techniques using local resources and more efficient tools and support equipment to ensure greater efficiency and improved productivity without exploitation. This will naturally come about as a result of LBT being more widely taught and researched in Universities and Technical Colleges.



Labour engaged on LB sites will then warrant being recognised and elevated to a special skilled category. It is expected that the recent developmental work carried out by the ILO on LBT curricula for undergraduate and postgraduate engineering students, in conjunction with the Institute of Technology Cambodge (ITC) of Cambodia and the International Institute for Infrastructural, Hydraulic and Environmental Engineering (IHE) of Delft in the Netherlands, as well as the work carried out by Professor Rob McCuthcheon at the University of the Witwatersrand and Drs Ampadu and Tuffour at the University of Science and Technology in Ghana, will be more widely accepted and utilised by tertiary education institutions during 1995/96.

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### THE WORK OF ASIST

#### OBJECTIVE

Advisory Support, Information Service and Training (ALIST) is a project of the ILO whose mandate is to improve the efficiency of labour-based road programmes in Sub-Saharan Africa. The project is funded by Swiss Development Cooperation (SDC), the Government of Norway and Swedish International Development Authority (SIDA).

#### CURRENT SERVICES

*The ASIST project has three components:*

1. Advisory Support provides services related to technical, organisational and management aspects of labour-based road projects. In this work, ALIST liaises closely with the Multi- Disciplinary Advisory Team in Harare (SAMAT).
2. Information Services gather and synthesises general and specific information from the LBT field in order to disseminate it to practitioners and other interested persons and institutions
3. Training develops and implements, in collaboration with Kisii Training Centre in Kenya, international courses for engineers, senior technicians and trainers: and assists in setting up courses in national educational and training institutions.

A planned expansions of ALIST will provide for a Rural Transport component in Harare to advise on policies and technologies for improved rural accessibility planning and an Urban Works component in Nairobi to advise on LBT in urban renewal programmes.

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### Technology transfer that lasts

*from the paper by John Clifton, Feeder Roads Programme, Mozambique*

Modern technology transfer can only be successful if the executive responsibility can ultimately be left to counterparts. This not only requires ensuring commitment by instilling confidence in counterparts in the aims of technical assistance projects, but also designing that technical assistance in such a way that counterparts ultimately undertake the line function themselves with little or no external technical advice.



In the past, the perception of technical assistance was that of a line function, where technical assistance staff hired by donor agencies came in, did everything from A to Z and left to start another project elsewhere. Training and technology transfer were a side issue.

In the future, technical assistance must transfer its emphasis to institution building and counterpart development. The aim is to leave the executive responsibility to these counterparts. The

success of modern technology transfer therefore depends on the commitment of the involved parties, on the design of the technical assistance management.

### Commitment

Everybody in the project needs to work towards the same goal. Whether the people involved in the project are fully committed to this goal, however, depends both on the design of the project and on the individuals working in it. Going by the Mozambican experience, it would appear that counterpart commitment can only be realised if the counterparts have confidence in the aims of the technical assistance project - to put it another way, they have to believe that it will yield tangible results. Seminars in which counterparts can discuss all the aspects of the project are therefore vital. If the problem in a project is lack of commitment from the counterparts, it should be recognised that the sustainability of a function does not depend on the capabilities of national staff alone. They cannot, for example, function without the wider technical and material resources to do the job. In the Mozambican case, they were unable to function because they did not have the means to continue to pay for road rehabilitation and maintenance, to replace equipment, to buy spares and tools, to pay workers and so on.

### Design

There are four main approaches to the design of a technology transfer project. You can have a line function, where the responsibility for the execution of the task devolves upon the technical assistance

staff. Or you can have the counterparts acting as apprentices to the technical assistance staff. In the 'team work alternative', the technical assistance staff and the counterparts act as a team with line tasks and responsibility shared. In the last design alternative, the technical assistance staff act purely as advisers to the counterparts, who undertake the line function on their own.

These alternatives can often also be used as 'steps' in a process designed to achieve the ultimate goal of ensuring that the project can continue without any external assistance or at most with minimum technical management to "smell out" the right approach - which of course also includes sensing when the time is ripe to move on.

## **Flexibility**

Mozambique is a prime example of how the situation in the country can undergo tremendous changes during the course of a project. When the current project documents on the Feeder Roads Programme was presented, fighting was still going on. Now, travel by road is possible to anywhere in the country for the first time in over a decade. The scale of operations has mushroomed to the point where control and management are a real problem. Project management has therefore to be able to adapt rapid changes and to guide the project through them.

A common, occasionally serious problems with projects, arises when either the technical assistance staff or the counterpart are not performing; sometimes, it is a combination of both (interpersonal problems). Continuous monitoring of the project will help to spot such problems in time.

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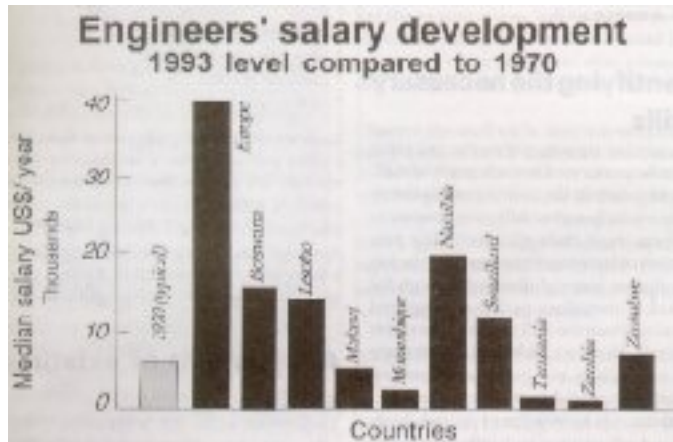
January 1995

### Capacity building

### it is not only about training

*from the paper by Robert Petts, Intech Associates, UK*

The success of training depends not only on the quality of the training, but also on the operational environment into which the trainees emerge - and therefore on the training's relevance to that environment. For training to be effective, and for both individuals and organisations to appreciate its importance, the trainees must feel assured that they are acquiring skills that will be useful in practice and will further their career prospects. Crucially - and this presently a major problem - they must be able to look forward to a reasonable remuneration package.



A structured analysis of a road authority's operations will normally show that a number of problems interact to restrict the performance of the staff and therefore of the authority. These constraints are usually about funding, or are institutional, or arise from technical, systems or manpower problems. Here we focus on technical, systems and manpower problems.

### Technical & Systems

For training to be successful

- systems should be developed and functional
- documentation and manuals should be available
- training materials should be developed
- training should be practical and reality oriented
- trainers should be competent.

## **Manpower and motivation**

The effectiveness of training is crucially dependent on the motivation of the trainees. If the trainee has no opportunity of applying the knowledge and skills he has acquired in practice, and individuals and organisations don't appreciate the importance of training, both the trainer's and the trainees's time and money are wasted. Apart from this, it is important that appropriate organisational structures and responsibilities exist, including manpower development and career development plans, so that the trainees themselves can see that the training is taking them somewhere and that career prospects exist. Finally, for the training to be effective, effective financial and technical audit systems are also needed.

chart here

## **Salaries**

A major motivation factor for trainees is a reasonable remuneration package. Presently, however, it is more often that not a major demotivator, especially among engineers and managers. The disastrous decline in their salaries over the last 25 years is well documented. (See the chart above).

Engineers are often forced to supplement their meagre salaries through various authorised and unauthorised means. The end result is that the "availability" of engineers to carry out their official duties is severely reduced. This is not only wasteful it is misdirection of a valuable source, as a result of which other initiatives to improve road authority performance are constrained.

It is time an effort was made to restore fair remuneration packages for engineers and other highly skilled personnel, either through civil service reform or other institutional and sustainable arrangements. It will also be necessary to insist that future training programmes are integrated with initiatives to establish a motivating environment for the targets of the training efforts. Although it may not be possible fully to tackle all of the issues raised, a concerted attack across the range of issues should bring about a marked improvement in the effectiveness of training and manpower performance. It will then be possible to reverse the dramatic decline in the local capability to manage Africa's roads.

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### SELECTION PROCESS FOR FINDING TRAINEES

*"Lesotho Model" from Contractor Training Programme in Lesotho, C. Brentsen*

- advertise on radio and in newspapers 2 - 4 weeks
- applications by firms and individuals 4 - 6 weeks
- review and screen applicants 2 - 3 weeks
- workshop and test results 1 - 2 weeks
- invite for personal interview 14 - 16 applicants
- verification of information and final selection 2 - 3 weeks
- short listed trainees pay non-refundable admission fee (12 trainees)
- 12 months contractor training starts

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Who needs training?

## Using TNA to train the team to work as a team

*from the paper by James Markland, Feeder Roads Programme, Mozambique*

**Because different members of a construction team come to the project with different levels of skill and have different roles to play, they have different training needs, which need to be taken into account when designing a training programme. Successful training needs assessment (TNA) therefore requires a methodical approach that first defines organisational structure and responsibilities (job descriptions), identifies the skills necessary for the jobs, and then proceeds on that basis to produce learning objectives. These are then combined with an assessment of existing skills to develop course materials and plan individual courses.**

The success of any labour-based road construction project is dependant in the final analysis on team effort. Each member of the team has a part to play in ensuring the smooth running of the project. When a training programme is being planned, for either a new or an existing project, the needs of each of the members of this team must be considered, and the training designed to ensure that they all work effectively together.

## Defining the team

The essential step in the assessment of training needs is the production of an organisational chart for the project. This chart should show the relationship between each of the grades of staff and should define the flow of responsibility. All members of the construction team should be included.

It is important that this organisational structure is defined, agreed and understood by all parties before the assessment advances beyond this first stage, so that everyone is aware who is to be trained, and what they should be capable of doing on completion of that training.

The next step is to define the responsibilities of each of the staff grades by producing job descriptions for all grades of staff who appear in the organisational chart. The job description should list all the duties and responsibilities of the staff member. It is important that the list is complete, and it may be necessary to amend it as a result of visits to the sites. Care should also be taken to identify administrative and reporting functions as well as the basic engineering tasks. For example, the failure to requisition supplies of fuel on time can be just as expensive a mistake as poor organisation of the work force.

## Identifying the necessary skills

The job descriptions define the tasks that are to be performed by each grade of staff. The next in the

training needs assessment is to define what skills are necessary to perform those tasks effectively. The production of learning objectives from the job description is straight forward enough for technical operations, as all that is required is to note down the skill needed to perform that task. However, tasks that are managerial or decision making in character require more careful consideration because, in addition to knowledge of the task, background information and attitudes are also important factors and should be included in the learning objectives. When dealing with skills outside your own area of experience, consult with colleagues who have specialist knowledge of those skills.

The listing of learning objectives is made easier if they are grouped under a series of main and sub-headings. The following are recommended:

### **Labour-based construction**

- reasons for the adoption of labour-based methods of construction
- management methods that are specific to labour-based work
- labour-based construction operations

### **Administration**

- personnel management
- financial management
- asset management

### **Construction technology**

- the contract system
- technical methods
- site management

Each of the learning objectives then becomes the topic for a module or part module of a course. This method enables a logical series of course modules to be produced from the learning objectives. Also, subjects that may be taught as part of a more general construction training programme are easily identified and isolated.

### **Assessment of existing skills**

To produce a training programme that is relevant and economic and maintains the interest of the participants, courses must be designed such that the starting point of the course corresponds to the level of the trainee at the start of the course. Trainees' practical experience must be used in the learning process. Incorrect working practices and bad habits should be identified and the motivation for correcting them provided.

### **Level of existing skills**

- the abilities of each staff member in relation to the requirements of their job.
- particular areas in which staff, or their managers, identify a need for major training input.

### **Priorities in term of skills and staff grade**

- which are the most needed courses?
- which grades of staff are most in need of training?

There are several possible techniques for the assessment but practice shows that the most valuable one is the overall impression which is gained during a site visit. For gaining a good overall impression, you should find out if all the labourers are busy, if the plant is being used efficiently and if the tasks are set out for the next day; you also need to ascertain the quality of the finished product. Select also a few key questions which are asked as part of a general conversation with an individual staff member. Be sure to explain the reason for your visit and put the person at ease before asking questions. For example, a supervisor could be asked how many labourers were present that day.

Observe the staff while they are working, using a check list of duties for each staff grade as a guide. Check to see whether reporting forms or records are being kept currently. You may find that junior staff have a good knowledge of what they are supposed to do, but fail to put it into practice. This is an indication that they are not being properly supervised.

It is essential that staff responsible for training visit the construction sites during this assessment process. The engineers involved in the day-to-day running of the sites should also be involved in the detailed assessments, as they will have a good knowledge of the capacities of individual staff members. The trainers will be able to give a more general overview in terms of quality of work compared with that being achieved elsewhere in the country and region. These visits are also a useful opportunity to meet senior staff and find out what they see as the priorities for training. Ideas about the training programme can be discussed, which often leads to valuable improvements. The more input staff have into the final plan, the more likely they are to work for its success.

## **Development of courses**

Course development follows from the production of the learning objectives and the skills assessment. While the list of different courses for each staff grade is defined automatically by the learning objectives, the detailed course material will be determined by the existing skills of the staff.

As there will generally be a wide range of initial skills, and also to allow for the training of new recruits, it is sensible to prepare material to cope with a fairly low initial level. The trainer will then have the flexibility to use materials as required during lessons without having to produce new material. Special areas of weakness such as basic mathematics can be covered in individual courses.

In order to plan the physical and financial requirements for a training programme, the numbers of each grade of staff who will attend each course should be determined. The following points need to be taken into account:

- the numbers of existing staff, by grade
- the numbers of additional staff to make up the difference between existing staff and the requirements as estimated from the organisational chart.
- the possibility of filling vacant posts by internal promotion or recruitment, with time scale
- plans for future expansion.

## **Summary**

The planning of a training programme can be facilitated by the adoption of a methodical approach to the determination of training needs and the assessment of existing staff. The definition of the organisational structure and job descriptions for the construction team is the first step. Identification of the skills necessary to carry out each of the jobs enables a list of learning objectives to be produced, and these

objectives then from the basis for the developing course materials and planning individual courses.

## **DEVELOPMENT ENGINEERING**

If policy-makers, planners and engineers are to take labour-based technology into serious consideration when designing projects and programmes, they need to be properly informed. But the vast majority of these professional staff have had no training in or exposure to labour-based technology.

Recognising this deficiency, the ILO commissioned the International Institute for Hydraulic and Environmental Engineering (IHE) in Delft, Holland, to develop educational materials on labour-based civil works for use in undergraduate and postgraduate training, and in an orientation course for practising engineers and managers.

Apart from the technical aspects of labour-based methods, an important requirement was to integrate ILO principles and standards relating to worker's rights, equal treatment of female and male workers, and social security, into the course material.

Following a workshop for African universities held in Nairobi in 1989, the project was started in January 1992, funded by the Swedish International Development Authority (SIDA). A provisional version of material for the three courses was published in August this year.

By the time you read this, copies of the provisional material will have been sent to universities in Cambodia, Ethiopia, Ghana, Indonesia, Kenya, Laos, Nigeria, Philippines, South Africa, Tanzania, Thailand, Uganda, Vietnam and Zimbabwe. The next stage is for the Civil Engineering departments of these institutions to incorporate and test the materials in their course programmes.

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### 10 STEPS FOR PLANNING A TRAINING COURSE

1. draw up an organisational chart
2. define the responsibilities of each staff member and draw up job descriptions
3. define the knowledge, skills and attitudes necessary to perform the allotted tasks
4. draw up a list of learning objectives, grouped under main and subheadings
5. develop course modules to meet the learning objectives
6. assess each trainee's existing level of skill and experience
7. prioritise trainee's need for training
8. prepare course material
9. plan the individual courses
10. implement the training programme

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January 1995

### ASIST goes to town - LB infrastructure for the urban poor

by *Steve Miller, Senior Economist, International Labour Office, Switzerland*

The addition of an urban technical advisory services component to ALIST's Nairobi Office underscores the contribution labour-based methods can make both to improving the woefully inadequate infrastructure in urban squatter areas, slums and informal settlements as well as to creating employment in and improving the working conditions of the typically unhealthy, unsafe and exploitation urban informal sector. Thus programmes with 'social' objectives can also make economic sense by being cost-effective and sustainable.



Thanks to a contribution from DANIDA, ALIST will soon reinforce its Nairobi office with technical advisory services (at first consultants, but hopefully later a full-time adviser) in the field of urban labour-based infrastructure development. While the exact modalities still remain to be worked out, it is worth reflecting on how ILO/ALIST's experience in the labour-based road construction sector is increasingly in demand in the "urban" sector.

### What's the problem?

First of all, basic urban infrastructure is either non-existent or in deplorable shape in most urban squatter areas, slums or "informal settlements". Policy makers have in the past been reluctant to put in the required roads, drainage, electrical and piped water systems for fear of transforming what were seen to be temporary settlements into permanent urban communities. However, it is now recognised that the urban poor are not going to return to rural areas. In fact, most of the increase in urban population, growth is now attributable to natural population growth rather than to rural-urban migration. Therefore, there is an urgent need for basic infrastructure to service these communities.

### What kinds of infrastructure are needed?

Since slums and squatter settlements are often on marginalised lands, they are subject to flooding. Therefore, drainage is one of the first priorities identified by urban poor communities themselves. Afterwards, there is a need for accessibility through roads and footpaths, for erosion control and urban "greening" as well as water supply and electricity. Although water supply and electricity require sizeable non-labour inputs and therefore are not particularly labour-intensive, flood and erosion control works, as well as gravel road and footpath construction, can all be designed for labour-based implementation. Therefore, the experience of ILO/ALIST is especially relevant for tackling urban infrastructure

development and at the same time creating new sources of employment for the urban poor.

## Foundation for permanent employment



Labour-based upgrading schemes can also provide the foundation for more permanent employment in what is known as the urban informal sector. The ILO has decades of experience in research and action programmes relating to the urban informal sector. Some of this work involves small and "micro-enterprises" range from women selling fried fish outside their houses, to a producer of cement blocks, to a motorbike mechanic operating on the street corner. Larger but still very small-scale enterprises involve carpenters

working out of their houses, small construction firms, neighbourhood health clinics, etc. Whereas it is desirable to promote employment and incomes in promising and productive micro-enterprises, the other, "down" side to the urban informal sector includes unhealthy and unsafe working conditions, child labour, and exploitation by unscrupulous employers or middlemen. For the ILO, this is the dilemma of the urban informal sector. Whereas the formal sector clearly cannot provide the employment opportunities needed by the poor, the ILO should not, with one hand, be promoting the forms of exploitative and unacceptable employment which it is trying to combat with the other.

## A win-win development strategy

However, labour-intensive urban infrastructure development can go hand in hand with the improvement of both employment and working conditions, in a rare win-win development strategy. First of all, the incomes which the urban poor earn as construction workers in labour-intensive upgrading schemes can subsequently help the same workers to invest in the required capital investments for small-scale business and income-generating activities. Also infrastructure upgrading improves the productivity and working conditions of existing and new enterprises operating out of poor and unplanned urban settlements. Road and footpath accessibility, proper drainage and sanitation, all make a positive contribution to sustainable employment creation in these settlements. Therefore, there is scope for improving the linkages between employment-intensive infrastructure development and projects to promote the urban informal sector, which in the past often have been seen as being two separate activities.

## What is the ILO already doing in the urban sector?

Demonstration projects in community-based upgrading schemes So far, our experience is limited. One community-based drainage scheme has been completed in Kalerwe, a low-lying settlement in Kampala, Uganda. Another is underway in Hanna Nassif, an unplanned settlement in Dar-es-Salaam, Tanzania. The ILO also has had experience with "self-help" and "food for work" approaches in the PUSH project in the secondary town of Kaya in Burkina Faso. These projects are already starting to illustrate some of the alternatives for upgrading of urban poor settlements. These alternatives include:

- Contracting out works to small-scale construction enterprises, either within the formal or informal sector
- Full community contracting, where the community receives technical assistance, especially in designs and standards, but is both financially and technically responsible for all aspects of construction, including procurement of construction materials and management of the project

## budget

- Labour-only community contracts where the community provides and organises labour inputs on a contractual basis, but where other management aspects are handled by the local governmental authorities, or by the "project"
- Food for work implementation where works is organised on a force account basis, and paid for partially or entirely in food rations.

## **"Mainstreaming" labour-based approaches**

As has been the case for the rural-sector roads projects, the strategy could involve small-scale demonstration projects, and then mainstreaming these approaches into larger investment projects, including urban infrastructure investments for informal settlements, alongside the more traditional lending form primary and secondary infrastructure. Although such programmes certainly have "social" objectives of poverty alleviation and employment creation, they also often make good economic sense. Such investments can increase enormously the productivity of the urban informal sector, and make an important contribution to the productivity and the Gross National Product of developing countries, where only a relatively small percentage of the urban population works in the formal sector.

As a result of the Kalerwe drainage upgrading project in Uganda, a National Policy Seminar on Investment Policies for Employment Generation and Poverty Alleviation was organised in may 1995. Participants from Uganda and Tanzania, including both national governments and city authorities as well as community organisations, looked at the benefits and difficulties associated with community participation. They also tackled the related problems of solid-waste management, especially why garbage always seems to end up in the drainage canals. Thirdly, the seminar was designed to encourage the dissemination and "mainstreaming" of the Kalerwe approach into larger investment programmes.<sup>1</sup>

## **Making "social funds" more productive**

The ILO is also formulating a support programme for francophone West Africa that will include assistance to a series of "Social Fund" type country programmes known by the French acronym "TIPS"<sup>2</sup>. Here the objective is to improve both the impact of these programmes on employments as well as the cost-effectiveness of the investments. Even though "social funds" and urban upgrading of squatter settlements can be seen as social poverty-alleviation programmes, hard-nosed economic criteria should be used in designing programmes that are both cost-effective and sustainable.

## **The Urban Poverty Partnership**

The ILO has developed a framework for co-operation with the United Nations Centre for Human Settlements (Habitat) in Nairobi and the United Nations Volunteers organisation. This co-operation, known as the Urban Poverty Partnership, helps us access the networks of each agency. The proposed ALIST technical advisory services component to be developed in Nairobi will help us develop close co-operation with habitat in upgrading and informal-sector development projects in areas of mutual interest. Likewise, UNVs can provide not only technical engineering inputs, as is the case with many ILO-supported roads projects, but also valuable inputs into the complex issues of community participation in an urban setting.

## **Habitat II**

At the policy level, the ILO is planning to feed some of the lessons learned from urban labour-based upgrading and employments schemes and the urban informal sector, into the Second United Nations Conference on human Settlements, also known as Habitat II, or the Cities Summit. In preparation for this Conference, the ILO will organise a tripartite seminar on the Future of Urban Employment in Turin from 5-7 December.

## Where do we go from here?

The urban advisory services component being developed in ALIST Nairobi will therefore be a key element in an overall strategy for labour-based upgrading schemes in urban informal settlements.

Among the potential activities which these advisory services will be supporting are:

- The Hanna Nassif upgrading project in Dar es Salaam
- Appraisal and implementation of a new community-based upgrading support project in Dar es Salaam funded under the National Income Generation Programme;
- Advisory services to the World bank financed Non-motorised Urban Transport Component of SSATP in Nairobi and Dar es Salaam;
- Follow-up on the Uganda National Seminar on Investment Policies for Employment Generation and Poverty Alleviation;
- Exploration of the potential for "mainstreaming" approaches tested during the Kalerwe Community-based Drainage Upgrading Project in Kampala into Uganda's World Bank financed Peri-urban Infrastructure Project;
- Collaboration with UNCHS in the World bank financed Community Infrastructure for Dar es Salaam.

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1 The final seminar report is available through ILO/ ASSIST Nairobi Travaux d'intérêt public pour l'emploi. At present, the labour-intensive aspect is relatively low, as only around 20 per cent of the total project costs are accounted for by labour.

## **4500 records in 3.5"**

### **ASSIST bibliographic database now available**

A read-only version of the ASSIST bibliographic database of labour based technology publications is now available on diskette. The database contains about 4500 records of published and unpublished material collected by ALIST. You can order a copy for your own use at only US\$15.00. To order write to the TES.

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[Asist Bulletin no. 4,](#)

January 1995

### Visual Presentation

By David Mason and Kati Autere, ILO/ALIST Nairobi

**Some of you will have attended seminars or workshops where you were encouraged to participate in the action, and where the results were colourfully displayed on pinboards. If you enjoy the experience, or if you just want to know how it's done, this pullout centrefold is designed for you.**

### Why use a visual presentation system for learning and working?

Scientific experiments have shown that

- people retain 20 per cent of information acquired by hearing
- people retain 30 per cent of information acquired by seeing
- people retain 50 per cent of information acquired by both seeing and hearing
- by a combination of seeing, hearing and personal participation, people retain 90 per cent of the information received.



The visual presentation system is a successful and innovative method for interactive work with and within groups. Those taking part do not just listen, but actively participate by each making a contribution to the visualisation of the subject matter.

### How to get started?



No need to struggle to be heard - just pin it on the board. The visual presentation system guarantees that nobody in your training session or meeting is left out in the cold.



With the visual presentation system, you can make sure that whatever is said in your meeting is recorded immediately; all the ideas and opinions are written on cards. When they are also pinned on the pinboard, they will be remembered.



Everybody has a chance to give their opinion; when you see everybody else pinning their ideas on the board, you won't stay in your seat either.

It is very easy to develop ideas; you just need to group the cards in a different way on the board and everybody understands what is going on.

You don't have to assign one person to keep records; with the cards, the recording almost takes care of itself.

However, you as facilitator have to make sure that everybody knows how the system works. It is also your responsibility that the discussion remains within the topic and that it develops to conclusions.

Get yourself a pinboard or two, big brown paper sheets, coloured cards, marker pens and pins. Pin the brown paper on the pinboard so that it covers the board and you are ready to.



## When can you use the visual presentation system?

The visual presentation system can be used for all types of group work: seminars, workshops, training, meetings and conferences.

## The key question and...



Pin the topic of your meeting on the board and arrange the participants in such a way that they can see both the pinboard and each other; it will make the discussion easier.

Give every participant a pile of cards of assorted colours, preferably of the same shapes, and two marker pens of different colours. Write a stimulating question (the key question of the meeting) on a card and pin it on the board.



Instruct the participants that the ideas they come up with as an answer to the key question, have to be written down on cards - one idea per card, described in two or three words. Keep it simple, as it will be discussed in detail later.

## Organising the cards

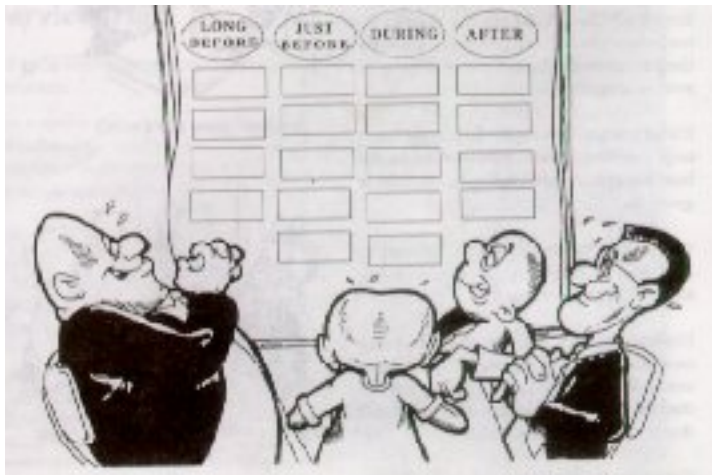


Now, you have to agree with the participants how to organise the cards. Using two pinboards is the easiest; you can have the results of the brainstorm on one and organise them under agreed headings on the other, preferably using a new colour and/or shape for the cards bearing the headings.

A common way to organise ideas is to ask questions: why, when, who etc. Sometimes, for example in the planning of a training course, it is useful to have time-spans and deadlines for doing different things.

At this stage, you can look critically at the ideas - some may not be relevant to your subject, but could be worth keeping in mind for another time.

## ...the brainstorming session



Now you can give their intellects free rein - that is, you can start brainstorming. Though not a must, this is a very good way to start any planning session. With brainstorming, you quickly get the participants' minds into gear, producing ideas, experiences and opinions.

Ask the participants to pin their cards on the board as soon as they are ready with their ideas. You can do it for them yourself if you so wish, but it is usually a good idea to give the participants some physical exercise - to keep the blood circulating to their brains!

To begin with, it doesn't matter in what order the idea-cards are pinned on the board. The next step is to start organising the cards.

## Who is responsible?



Your planning or training should also bring results. The next thing to do is to go one step further and make sure each task or idea has a suggested action and/or person responsible.

You can also organise the cards so that everybody sees their individual work plan directly.



## What is needed?

### *Material and equipment required*

- Pinboards measuring 1.5m by 1.2m mounted on stands
- Rolls of brown paper with a width of 1.2m, or sheets cut to the size of the pinboard
- coloured cards in different shapes and sizes
- map pins with round heads 20 mm long. You will need hundred of these. A pin cushion to held these pins is very useful, but not essential
- chisel tip marker pens. You should have various colours but mainly black, with some red and blue. The number required depends upon the size of the group you are going to work with.
- A roll of masking tape
- A supply of glue sticks
- A pair of scissors
- A stout box to keep everything in



If you want to buy this equipment, contact:

Newland AG

6342 Baar, Switzerland

tel: +41-42-310414

fax: +41-42-313044

## What about recording?

After the meeting has agreed on what has been pinned on the board, you can glue the cards on the brown paper. This is the document and presentation of results.

If you need a more formal document, you can ask somebody to write the information down. Another, and much quicker, option is to photograph the sheet. Tape the sheet on the wall and take the picture.

Now you have both a big record sheet which you can even show in other meetings, and you have also recorded everything on film.

## How to make your cards?

- obtain sheets of thin cardboard (150 gms weight) of different colours
- cut them up with a paper cutter (fast!) or with scissors (slow!) Into the size and shapes you want
- suggested shapes and sizes are: many rectangles 205 mm by 95 mm; a few ovals 190 mm long and 110 mm wide; a few circles of various radii (95 mm, 140 mm, 195 mm). You could also try hexagons 165 mm wide, and rectangles with their ends cut to form rhombus shapes.

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January 1995

### Pinboard construction

#### How to make your pinboard

*(Give the job to your carpenter)*

You will need (for each pinboard)

- a sheet of fibre board (ceiling board) 152 cm (5 feet) long by 122 cm (4 feet) wide and about 16 mm (5/8 inches) thick
- pieces of planed timber 50 mm (2in) wide by 25 mm (1in) thick: two 190cm (ft 3in) long (A), one 122cm (4ft) long (C), two 60cm long (D), and four 50 cm long (E)
- pieces of planed timber 12 mm square: four 149.5cm (4ft 11in) long (F), and four 122 cm (G)
- screws, nails and wood glue
- paint

#### Assembling your pinboard

*(See the diagram opposite)*

1. Cut the fibre board to size
2. Cut the timber to length
3. Cut a tenon at one end of each of the A pieces
4. Fit the two A pieces and the B and C pieces together to form the frame for the fibre board. Screw and glue the four joints.
5. Nail two of the F pieces and two of the G pieces around the inside of the frame
6. Place the fibre board inside the frame, and retain it in place by nailing the remaining F and G pieces around the edge
7. Cut a mortice into the centre of each of the D pieces. These form the bases for the two uprights (A) of the frame
8. Cut the ends of the E pieces at an 45 degree angle to form the bracing legs
9. Cut a 12mm rebate at each end of the D pieces to take the E pieces
10. Cut a 12mm rebate at the top end of each of the E pieces to fit around the A pieces
11. Fit and glue the uprights (A) into the bases (D) and screw and glue on the braces (E)
12. Paint the frame and the fibre board.

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### Access road to Kabiro

by *Angela Kabiru, Information Services Coordinator, ILO/ALIST and George Simba, Lecturer, Department of Civil Engineering, Jomo Kenyatta University, Nairobi, Kenya*



ILO/ALIST recently provided technical and advisory support to a project to rehabilitate an access road in an urban low income settlement in Nairobi using labour-based methods. The 400 metre road leading to a community centre, the Kabiro Human Development Project in Kawangware, part of which was previously bituminised, was in an appalling state and was largely impassable particularly during the weather. The Kabiro project was founded by the Institute for Cultural Affairs (ICA), an International NGO based in Nairobi. The

project encompasses an integrated development approach by providing the community with health care, primary and vocational education as well as by improving the physical environment. Access to the facilities at the Kabiro Centre was inhibited due to the poor state of the road. The ICA were ready to provide the funding for the rehabilitation of the road. They approached ALIST for advisory and technical support after receiving exorbitant estimates for a local contracting firm who proposed to utilise conventional methods. John Omwansa, a former ALIST Roads Engineer, drew up a rehabilitation programme in consultation with the local council and community representatives. He recommended a local labour-based expert, Mr George Simba, a Civil Engineer lecturer at Jomo Kenyatta University, to ICA. As the site engineer, Mr Simba drew up a detailed proposal in collaboration with ALIST staff that involved the use of labour-based methods and cost only a fraction of the earlier proposal.

The rehabilitation work was undertaken under the close supervision of Mr Simba with advisory support from ALIST, with a labour force comprising both men and women drawn entirely from the local community. All tools and equipment used were sourced from local small-scale entrepreneurs, otherwise known as "jua kali" artisans in Kenya. The improvement procedures employed were modified to tackle the varying condition of the road. On the parts of the road previously bituminised, the broken tarmac was cut away to expose the road base. Next, the camber was built up using material from the site ditch, followed by a gravel layer 15 cm thick. For the unbituminised sections of the road, stripping, excavation and cutting away of accumulated solid waste was done, followed by ditching, camber formation and gravelling. Compaction was done before and after placement of the gravel. The ditches along the entire 400 meters were lined with stone sides resting on concrete invert drains bedded on gravel. The work was successfully completed in about 1350 mandays, and the road is now gravelled with proper drainage.

The success of this work shows how labour-based techniques, which are often restricted to rural access roads, can be usefully employed for road construction and maintenance in urban informal settlements where the infrastructure is often neglected by local councils. The use of labour-based methods in such low income communities where unemployment is high provides a source of employment, and gives the community a sense of ownership of the road. This should encourage them to contribute towards its maintenance.

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### Landmark employment promotion seminar in Harare

*By Mike Shone, Senior Technical Adviser, ILO/ASIST Harare, Zimbabwe*

Representatives of Governments, employer organisations and labour unions as well as other resources persons from 9 countries served by the ILO / SAMAT office came together for a historic Employment Seminar in Harare in September. The event was organised by Terje Tessem, Senior Engineering Adviser, SAMAT with support from ILO/ALIST and opened by ILO/AREA office Lusaka Director Mr Adam Simbeye and the Minister of Local Government, Rural and urban Development, John N. Kgomo.

Three keynote papers were presented: "Technology choice - men or machines" by Maria Lennartsson and David Stiedl, ALIST, provided a review of labour-based and machine-based costs on selected roads in Lesotho and Zimbabwe and discussed the latest criteria for decision makers for making Technology Choice decisions.

The second paper was on community participation and examined two case studies in Zimbabwe and Botswana carried out by Joshua Nyoni of Zimbabwe. This paper was also contributed to by Joan Bijl and Terje Tessem of SAMAT and Mike Shone of ALIST.

The third paper was prepared by SAMAT's specialist in labour law, David Tajgman assisted by two consultants from Lesotho and Zimbabwe. The paper provided for a provocative discussion on the rationale and need for the ILO's labour convention.

The seminar was conducted using ZOPP moderators from Zimbabwe, and generated a high level of interest and debate. Copies of the keynote papers are available from Terje Tessem, ILO/SAMAT, P O Box 210 Harare, Zimbabwe, tel: +263-4-759438, fax: +263-4-759373.

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### Papers mean prizes - the MART initiative

The Management of Appropriate Road Technology (MART) initiative is a joint venture of the Construction Enterprise Unit, base at Loughborough's Institute of Development Engineering, specialist consultants Intech Associates, and IT. Transport Ltd working very closely with ILO's POL/DEV department in Geneva and the ALIST project. It arose from a GBP 410,000 research contract awarded by the Engineering Division of the Overseas Development Administration (ODA) under its Technical Development and Research (TDR) provision.

The project is in one of ODA's priority engineering research areas, which is to "reduce the cost of constructing, rehabilitating and maintaining road infrastructure and vehicle operations" in developing countries. Over the past twenty years, labour-based technologies have been proved to be effective and economic on projects in a wide variety of countries and the demand for advice and assistance on their implementation continues to grow. However, two key problems remain:

- Expenditure upon labour-based projects by international agencies and donors has grown so dramatically that more attention has been focused on managing individual projects that on research into information and systems that would achieve comparable outputs with less expensive inputs. The fragmentation of technical expertise means that much effort is wasted on repeating development of tools and equipment, which could be standardised where possible.
- The involvement of the private sector has so far been limited, with the result that there has been a failure to mobilise entrepreneurial skills and create enterprises that could develop improved techniques and provide lasting employment opportunities on their own.

A seminar/workshop is being planned with the ILO for November 1995 in Harare as the first major joint ILO-MART event. A second joint workshop will be held in Ghana in April 1996 immediately prior to the ILO/ALIST 5th Regional Seminar. The participants will review current knowledge and experience in labour-based road construction and maintenance and identify priorities for action. Thanks to the generosity of the British Public Works Association, it is able to offer prizes for technical papers in three of the MART priority areas:

- hand tools
- intermediate equipment
- institution-building

Two prizes of GBP 500 each will be awarded in each topic area, one for a UK author and one for an author based in a developing country. The winning papers will be selected by a specialist editorial panel and will be incorporated in a research document entitled "Taking stock", which will be published as a basis for planning future phases of the MART project.

Papers must concentrate on one of the three MART topics. They should present a concise review of the "state of the art" in one or more countries to enable other to benefit from these experiences. The papers may also discuss the future initiatives or research required in the topic to develop effective appropriate technology roadworks systems.

Papers should be in the range of 3,500 to 5,000 words and should be accompanied by a short synopsis and a brief description of the author. The papers must be received at the latest by 31 December 1995. Informal enquiries regarding the suitability of proposed topics may also be make to Derek Miles at the following address: Derek Miles, Director, Institute of Development Engineering, Loughborough University of Technology, Leics. LE11 3TU England. Tel: +44- 1509-222885, fax: +44-1509-211079.

Efforts are being made to secure further sponsorship to enable the selected prize winners to attend workshops.

MART is still interested in hearing from institutions that are prepared to join the MART network, as well as from financing agencies, donors and consultants who are willing to share ongoing project experience. Interested persons should contact Derek Miles at the above address.

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## Book Reviews

### **Improving income and housing: employment generation in low-income settlements**

*United Nations Centre for Human Settlement (Habitat), Nairobi. 1989. Order no. HS/189/89E, ISBN 92-1-131110-0.72pp.*

This is an early and important study of the potential for improving income and upgrading housing areas at the same time and by the same policies. It reviews the experience from around the world in a brief and accessible manner, and could be regarded as a good introduction to the field of improving living conditions in urban low-income areas while adding jobs to the labour market.

Such areas as building materials production and the recycling of domestic wastes are shown to be important employment generators besides being 'self-selecting' to the poor. The volume closes with suggestions for institutional support.

### **Contractor development in Labour-based construction**

*Edited by RB Watermeyer, City of Soweto. 1992.*

This monograph gives a step-by-step guide to the Soweto method of urban development, which involves planning for labour-based activity rather than just attempting to maximise labour-use in conventional activity. This is achieved through improving the efficiency and viability of contractors who use labour-based methods of construction in infrastructure provision.

There are also compelling descriptions of several projects, which bring out the problems encountered in working in Soweto. Typical of their approach is the installation of a storm-water drain. Instead of planning for a conventional spun-concrete drain, the installation of which cannot be handled by human effort alone, the project was redesigned to use a masonry-lined rectangular trench with concrete plank covering. Thus, labour-based methods were used and considerable economic multipliers were created.

### **Community-based urban upgrading: what are the issues?**

*Erik Lyby, DanEduc a/s. 10 pp.*

This paper looks at the scope for upgrading informal settlements. The introduction to the paper is very well done, laying the foundation for arguments presented later foundation for arguments presented later in the paper. The economic situation that several developing nations find themselves in, and the implementation of structural adjustment programmes and their effect on urban communities, are looked into. The Kalerwe drainage project in Uganda is used as the "case study". This is a brilliant paper on

urban upgrading and the key issues affecting urban works.

### **From want to work: job creation for the urban poor**

*International Labour Organisation, Geneva. 1993. ISBN 92-2-109086-8. 66 pp.*

This is a short publication dealing with all the key issues involved in creating employment opportunities for the urban poor via employment-intensive infrastructure construction programmes. It is well written and draws upon a wealth of experiences in and lessons learnt from such projects in different countries in both Africa and Asia. Issues such as urban poverty, the informal sector, project sustainability, building rights and land tenureship are all addressed in this publication.

### **Shelter provision and employment generation**

*United Nations Centre of Human Settlement (Habitat), Nairobi and International labour Organisation, Geneva. 1995. ISBN 92-2-108523-6. 371 pp.*

This publication, based on a research paper by Graham Tipple (University of Newcastle), takes a very in-depth look at the urban poor, the housing situation in urban areas and the need for adequate and appropriate urban housing besides exploring the employment opportunities that would be created in the provision of the required housing.

Employment generation and poverty alleviation in poor urban communities are rigorously covered, with lessons adduced from various projects in the developing countries studied. Finally, the book looks at small-scale employment in the residence, hazards, importance of home industries etc. As such, it is good reference material, useful for wide audience, from those involved in such projects to academics in the labour-based world.

### **The urban informal sector in Africa in retrospect and prospect: An annotated bibliography. International labour Organisation Bibliography No. 10.**

*International Labour Organisation, World Employment Programme, Geneva. 1991. ISBN 92-2-107747-0.96 pp.*

If you want to know who has written what about the urban informal sector in Africa, this publication provides you with the names and all other necessary information from 1980 onwards. The information is classified under: formal-informal sector linkages; credit can finance; education and skill formation; women in the informal sector; policy and constraints and direct interventions.

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## DIARY OF FORTHCOMING EVENTS

### JANUARY/FEBRUARY 1996

#### *INTERNATIONAL TRAINING OF TRAINERS COURSE*

15 January - 16 February 1996. Kisii Training Centre, Kenya. Fee USD 3500. Read more about the course in the enclosed brochure.

#### *CONTRACTOR DEVELOPMENT AT LOUGHBOROUGH. 29 January - 16 February 1996.*

A new 3-week modular-based course, within Loughborough's WEDC postgraduate programmes, brings together recent experience in construction industry development and institutional issues related to the use of contractors on labour-based projects. Contact: Administration Secretary, Institute of Development Engineering/WEDC, Loughborough University of Technology, Loughborough Leics. LE11 3TU, UK. Tel: +44-1509-222885. Fax +44-1509-211079. Telex: 34319 UNITEC G. e-mail: WEDC@lut.ac.uk.

### MARCH/MAY 1996

*ARCHITECTURE & DEVELOPMENT*: advance international training programme. 18 March - 10 May 1996. Lund Centre for Habitat Studies, Lund, Sweden, Sponsored by SIDA.

### APRIL 1996

*MART WORKSHOP*. 18-20 April 1996. Accra, Ghana. Organised by MART

*REGIONAL SEMINAR FOR LABOUR-BASED PRACTITIONERS*. 22-26 April 1996. Accra, Ghana.

Organised by the Department of Feeder Roads in conjunction with the ILO/ALIST project.

*REGIONAL MEETING FOR UNIVERSITIES OFFERING LABOUR-BASED CURRICULA*. 27 April 1996. Accra, Ghana. Organised by ILO POL/DEV.

### MAY 1996

*LABOUR-BASED ROAD ENGINEERING FOR DEVELOPING COUNTRIES*. Orientation course for engineers and managers. 6-10 May 1996. The course aims to familiarise participants with the skills necessary to plan, design, monitor and evaluate road sector programmes using local resources and to make a rational choice of technology for their implementation. International Institute for Infrastructural, Hydraulic and Environmental Engineering, P O Box 3015, 2601 DA Delft, The Netherlands. Fee DFL 2500.

### MAY/JULY 1996

*INTERNATIONAL SENIOR TECHNICIANS COURSE.* 20 May - 5 July 1996. Kisii Training Centre, Kenya. Fee USD 4500. Read more about it in the enclosed brochure.

## **JUNE 1996**

*ROAD MANAGEMENT FOR SENIOR ENGINEERS.* 17-28 June 1996. Crown Agents, St Nicholas House, St Nicholas Road, Sutton, Surrey, SM1 1EL, UK. Tel: +44-181-643 3311, fax: +44-181-770 0479. Fee GBP 2400.

*RESIDENTIAL COURSE ON APPROPRIATE TECHNOLOGY ROAD WORKS FOR DEVELOPING COUNTRIES.* 24-28 June 1996. Transport Research Laboratory and Intech Associates. Old Wokingham Road, Crowthorne, Berkshire, RG45 6AU, UK. Tel: +44-1344-773 131, fax +44-1344-770719. Fee: GBP 1250.

## **JULY 1996**

*RESIDENTIAL COURSE ON ROADS AND TRANSPORT IN DEVELOPING COUNTRIES.* 1-12 July 1996. Transport Research Laboratory Ltd (see address above), UK. Sponsored by ODA. Designed for practising engineers from overseas and engineers from industrialised countries involved in work in the developing world. Cost of GBP 2250.

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# ASIST

**ADVISORY SUPPORT INFORMATION SERVICES AND TRAINING FOR LABOUR BASED PRACTITIONERS**

A Programme executed by the Employment-Intensive Investment Branch (EMP/INVEST) of the ILO

[Asist Bulletin no. 4,](#)

January 1995

## PINBOARD

### **ILO/ALIST POSTERS ON DEVELOPMENT ENGINEERING AND LABOUR-BASED TECHNOLOGY**

ILO/ALIST has recently produced a series of six posters (A-2 size) which illustrate

- equipment or jobs
- equipment choice
- economic benefits
- social benefits
- quarrying opportunities
- trenching options

For your copy of these first edition posters write to ILO/ALIST Harare.

### **STAMP FOR LABOUR-BASED ROAD WORKS**

In Zambia the Post & Telecommunications wanted to commemorate the 75th "birthday" of the ILO by introducing a stamp in Zambia. The picture by Mr Hedstrom of two women working on a training site was chosen as the theme and can now decorate your letters of postcards at a value of K100. A great idea to promote labour-based methods!

### **INVITATION TO LABOUR-BASED ENGINEERS, TRAINERS AND PROJECT MANAGERS**

ILO/ALIST invites labour-based practitioners who wish to be registered on the ALIST labour-based practitioners database to forward updated CV's to: David Mason

Training and Information Services

Manager

ILO/ALIST

P O Box 60598, Nairobi, Kenya

Registration on the ALIST database enables the ILO and other labour-based organisations to be aware of the latest contacts with labour-based specialists in the event that short term or long term opportunities arise for project managers, technical trainers, project evaluators, programme formulators and developers and labour-based researchers.

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### PROJECT NEWS

#### Ghana

The Department of Feeder Roads (DFR) labour-based training programme is about to move into new purpose-built residential premises, after leading a successful but somewhat nomadic existence in recent years!



Labour-based training started in Ghana with the arrival of an ILO team to introduce the methodology in 1987. Originally, the pilot training project was located in Sefwi-Wiawso, and ran simultaneously with a programme of contractor training (with due acknowledgements to Mr P Bentall!)

Training to date has focused principally on producing site technicians for both the DFR and for contractors engaged by the DFR. However, training has until now been conducted in a series of rented and often unsuitable premises, with trainees having to put up with crowded accommodation and a lack of private study facilities. Trainers have generally been temporarily seconded to each course from within the Department's band of capable and committed engineers.

The new school buildings, constructed and equipped at a cost of almost USD 1 million, are funded through the generosity of DANIDA (46%), USAID (27%). The buildings, which include classrooms, a library, laboratories, offices and residential and recreational facilities for 32 trainees, will be completed and open for operations after mid-1995. The school will operate a fleet of appropriate equipment to give trainees site experience on a model road.

The school will be staffed by a full team of permanent, qualified training professionals, supported by administrative and domestic staff. It will offer a range of professional and technical labour-based and management courses to both Government and contractor staff. It will also serve as a centre to research and develop improved labour-based roadwork techniques.

The Department of Feeder Roads anticipates that the school will eventually cater for international trainees as well, to meet the expanding need for labour-based contractor training throughout the region. Maybe one day soon we can welcome your trainees to our exciting new Koforidua labour-based training school - we hope so!

*Charles Williams, Senior Training Adviser, Dept. Of Feeder Roads, P O Box 1432, Accra, Ghana*

#### Kenya

Kenya's labour-based road programmes continue to be at the forefront of the discussions about the future of the country's network. The Minor Roads Programme (MRP) continues in all agriculturally high potential districts. This programme has now changed its emphasis to routine maintenance, as the roads 2000 programme is expected to take over soon. The Roads 2000 programme, which is already running in three districts, using appropriate-technology choices based on the conditions of the particular district. The training programme of the KTC is in place for both the Roads 2000 and the international courses.

The SIDA-funded contractor-development programme based in Central Province has entered into a second phase. The formal training part has been completed in Kisii Training Centre (KTC) and the trial contracts have now been awarded. This phase will bring to 23 the number of labour-based contractors trained.

A small community-based road construction project was successfully undertaken in Kawangware, one of the poor residential areas on Nairobi. You can read more about it in the article "Access road to Kabiro".

*David Jennings, Senior Training Adviser TA, Kisii Training centre, P O Box 2254, Kisii, Kenya*

## **MINOR ROADS PROGRAMME - COAST PROVINCE**

Since 1974, the Kenya RURAL Access Roads Programme (RARP), followed by the Minor Roads Programme (MRP) under the Ministry of Public Works and Housing, have undertaken labour-based roadworks in the Coast Province. In 1994, DANIDA started financing MRP operations on the coast.

Though the programme is generally based on MRP strategies, it introduces some new principles: the change of selection criteria towards the network approach, and the introduction of partial and spot improvement. The intention is to have more effective road maintenance of a larger, coherent network and thus improve the accessibility of rural areas.

After one year of expanding activities, the MRP Coast Project is now operating smoothly though gravelling has been lagging behind due to delays in equipment procurement. A new locally developed tractor/trailer hitch has been tried out and has worked well. The average number of workers is 2,500; recruitment has been no problem. The casual-labour wage rate was recently increased from USD 1/day to USD 2.5/day.

A network of about 200 kms has been covered with improvement and periodic maintenance, and a network of 750 kms receives routine maintenance. These are mostly RARP roads, many of which are still in good shape.

*Arne Engdahl, Project Coordinator, DANIDA, P O Box 90663, Mombasa, Kenya.*

## **LESOTHO**

In Lesotho, as in many countries which have initiated labour-based road construction and maintenance programmes, these activities have so far generally been organised on a force-account basis, using labour recruited from local communities. The Labour Construction Unit (LCU), branch of the Ministry of Works, was founded in 1977 with two primary objectives: to promote efficient use



of labour-based construction methods in Lesotho; and to create as much gainful employment as possible. The LCU has since grown into a substantial organisation with more than 260 support staff and a manual labour force of 1,800 (about 40 per cent are women). However, the labour force is likely to grow to more than 4,000, as activities in the Southern Region build up and activities in the Eastern Region commence.

## **Project background**

In mid-1991 a World Bank team arrived in Lesotho on an Identification Mission to consider proposals for an Infrastructure Rehabilitation and Maintenance Project (IRMP). The Project was planned in two parts. The first part was to be called the Infrastructure Engineering Project (IEP) and was planned to cover the two-year period 1993-1994. The Infrastructure Implementation project (IIP) was to cover the next three years, 1995-1997. Essentially, the IEP would undertake all preparatory activities necessary for subsequent implementation, e.g. training, policy formulation etc.

The overall aim of the Infrastructure Rehabilitation and Maintenance Project is to derive economic benefits for Lesotho by investing in roads, public buildings, water and sewerage through the private sector. In 1991, a World Bank team concluded that significant institutional preparatory work and training were needed to ensure sufficient capacity to implement the IRMP. Thus, ILO's expertise was subsequently commissioned to carry out a study of the domestic contracting industry. The proposal for International Development Association's (IDA) assistance was submitted to the World Bank in March 1992.

In May 1992, a Government of Lesotho (GOL) delegation visited Washington DC, to negotiate a Development Credit Agreement (DCA) with the bank. The LCU's project of entrepreneurship development constitutes a key element of this Credit Agreement, amounting to USD 3.4 million, allocated to the training programme and associated works.

In May 1992, GOL formally requested ILO's assistance in the IEP, by way of specialist personnel to produce lecture material, give lectures, manage the training programme, and co-ordinate the procurement of equipment. In subsequent months, LCU advertised locally for individuals and small contractors interested in participating in the training programme.

The applicants were reviewed by LCU, and after workshops and a written examination, 15 candidates were initially invited to take part in the Small-Scale Contractor training Course. The course comprises two sessions of theory, two practical sessions, and two trial contracts of three months each.

The main accomplishments of the project during 1993 were the preparation of the draft training material for Batch No. 1 of the programme, completion of the first six weeks of classroom training, and the training and graduation of 12 contractors in Routine Maintenance. Of the twelve contractors who graduated in Routine Maintenance in 1993, eight also received their certificates in Regravelling (Periodic Maintenance) in 1994. The certificates and prizes were presented by the Minister of Works, and the presentation was covered by Lesotho Television.

At the request of the Contractors Association, which was founded by a core of the Batch No. 1 trainees, LCU then conducted a wrap-up workshop, during which their experiences, queries and problems during the training were discussed.

The original training programme was reviewed prior to and during the ILO/World Bank Mission in

February-March 1994. While the Terms of Reference are not changed, the time schedule was found to be too optimistic, and an amended schedule was agreed upon. This postponed the start-up of batch No. 2 until October 1994; it was also decided that the programme be extended to December 1995.

During the four months prior to the start up of Batch No. 2, LCU received applications from more than 70 candidates interested in attending the Small-Scale Contractor Training Course. You can read about the selection process on page 5.

After several months' delay in acquiring the vibratory rollers, due to transfer of funds, revised tender/purchase regulations etc., the tenders for the rollers and spare parts were opened at the Central Tender Board of Lesotho in March, 1994. The Official Notification of Award of Contract was sent to Dynapac Light Equipment AB of Sweden in August 1994. The rollers finally arrived on site in December, and were demonstrated by the agent in January and March 1995. Three rollers were earmarked for training purposes, while the remaining 10, plus an additional seven, will be available for purchase by the trained contractors, pending approval by IDA.

Through a more careful selection of contractors for the second batch of trainees, LCU expects to have a total of 24 graduates by the end of October 1995, which is nine more than expected. Further, the project team anticipates that it will complete the programme by November 1995 with an overall saving of at least 10% of the budget. A pre-appraisal Mission by the World Bank is scheduled for April 1995, when the entire IEP and IRMP projects are to be reviewed, as well as the logistics of extending the present contractor-training programme in labour-based road maintenance. The Mission will also assess the funding, manpower and other requirements for expanding the training to cover road construction.

Carl Berentsen, CTA, ILO Contractor Training Project, c/o UNDP, P O Box 301, Maseru, Lesotho.

## **Malawi**

Now already eight months into its second phase, the Pilot Integrated rural Transport Project is focusing its activities on development and improvement of "Integrated Transport Planning" - a methodology designed to facilitate the prioritisation of interventions in the rural-transport sector. The project is now under nationwide implementation, with the Ministry of Local Government taking the lead role. The ILO is the UN co-operating agency responsible for providing technical advice and "backstopping". PIRTP is currently responsible for the implementation of six rural infrastructure development projects involving a total cost of about USD 100,000 in this second phase. There are three pilot areas - Embangweni, Lobi and Neno-each with different terrain and altitude. The types of activities carried out comprise construction and improvement of rural roads, construction of footbridges and construction of road bridges.

One of the main goals of the project is to help the community to identify its needs as far as construction, improvement and maintenance of footpaths, tracks, foot bridges and road bridges are concerned. The decisions are made by the communities themselves, and the whole organisation of the projects is dependent on them. As a pilot exercise, the project has trained two batches of local artisans to produce and maintain "Intermediate Means of Transport" (IMTs) - bicycle trailers, ox-carts etc. The coming months will show how effective this exercise will be. Of course, the creation of production capacity is not enough in itself; therefore, the project is testing out different credit schemes to enable rural people to purchase these IMTs.

Another focus of attention is the improvement and construction of simple timber bridges, tracks and

footpaths, all on a self-help basis. These community-based projects have proved to be a success when it comes to bridges; however, the self-help spirit on other infrastructure works has been less than impressive. To improve the economic and social accessibility of people, the project also tries to influence spatial planning of services that are beyond its scope - for example, the location of schools, water wells and health posts.

The planning of activities in rural areas almost always means taking into account sectors other than transport. "Roads are not enough" is the adopted approach, and "Is a road the best option to address a specific transport problem?" is one of the questions the project tries to address right at the beginning. Apparently, this holistic approach, which requires a planner to balance inter- sectoral factors, is something of a novelty in Malawi. Nevertheless, in light of the new decentralisation policies, sectoral development projects are in great need of a workable framework for planning at district level. Already, it has been suggested that the 'Planning Methodology' be introduced in six pilot areas under the UNDP inter-sectoral development programme, which is meant to form the basis for nationwide implementation.

In the UNDP 5th Country Programme, the PIRTP is part of a larger Transport Component which also includes two other projects: the Pilot Motorised Rural Transport Project, which is setting up small enterprises engaged in leasing out trucks for the transportation of goods and passengers; and the well-known VARBAU (Village Access Roads and Bridges Assistance Unit) project is now operating in the Southern Region of the country, building labour-based concrete bridges and constructing and improving rural access roads, the bulk of the (unskilled) work is still done by voluntary labour.

The end of the present phase of PIRTP is set for mid-1996. However, Mr Elias Tseggai, the ILO Rural Transport Adviser, left the country in September and is currently engaged in consultancy work for various organisations. In addition, the three UNV specialists - Tint Swe (civil eng.), Mafizul Islam (socio-econ.) And Dr. Sultan (vet.) - are also expected to leave the project. This leaves the nationals, with advice from Rob Dingen (ILO Associated Expert), to continue with the implementation of project activities.

Rob Dingen and Tint Swe, PIRTP, P O Box 265, Lilongwe, Malawi

## **Mozambique**

The Technical Assistance Team has recently been increased by the arrival of Construction Advisor Zoran Veselinovic, UNVs (United Volunteers) Michael Katende and Mysore Raghunath Rao Krishna and Cooperantes Carlos Bezerra Brandao, Tomas Emanuel, Jai Chand, Braja kishore Sumata pattanaik and Jair Soares Amarel.



Production in the first six month of 1994 was disappointing with only 43% of the programmed production having been achieved. However, output improved during the second half of the year, with provisional figures for the whole of 1994 showing a total of 315km of rehabilitated road - i.e. 67% of the target. It is believed that these provisional figures are conservative estimates.

A total of 23 brigades are now operational or mobilising. In the course of 1995, this figure will rise to 39 brigades. This increase will be a severe test of the institutional framework, given theconcurrent change in many national institutions such as the restructuring of ECMEPs (parastatal works organisations),

privatisation of state companies and the reorganisation of the Ministry of Construction and Water, which is to become the Ministry of Public Works and Housing. Development of contractors is now a national policy and all further expansion of the Feeder Roads Programme will be by means of contractor development projects (in fact, some of the brigades already planned for 1995 will involve contractor development).

A national training needs assessment for the Feeder Roads Programme has now been completed and it is hoped that this will enable the DNEP Training Division to draw up a full range of course modules relevant to labour-based FRP works. Technical assistance is currently funded up to the end of 1995. Although the project runs to the end of 1996, UNDP funding for the final year has been severely cut back. Continuation of project activities after 1996 is not assured, although discussion with funding agencies on possible cost-sharing have been initiated. A donor review took place in October and a meeting report is expected shortly.

John Clifton, CTA, Feeder Roads Programme, P O Box 4595, Maputo, Mozambique

## **NAMIBIA**

The first phase of the current pilot project by the Department of Transport has now come to an end, having completed 9 km of road.

The second stage of the 18 km road has now started. The 9 km under construction is intended to be a testing ground for the small scale contractor development programme. The contractors' supervisory staff have been on site for the past three months and are familiarising themselves with the various labour-based operations. Actual training of contractors is expected to begin in early November. Bicon Namibia will continue as the engineers for this second phase, with an increased team that will also be responsible for the training of the small-scale contractors. They in turn have subcontracted the actual training to Promatra. ILO will provide "equality assurance" in the form of a training consultant, who will help set up the training programme.

At the end of the contractor-training phase, it is envisaged that the contractors will be engaged by the Department to carry out labour-based construction and maintenance jobs.

Mr. Tajgman, the Labour Standards Specialist from ILO/SAMAT, undertook a mission to the labour-based programme in Ovamboland to carry out a review of the way the labour legislation affected the project. His findings are available from SAMAT.

## **Tanzania**

ATATAP (Appropriate Technology Advisory and Training Project)

Tanzania has established two Appropriate Technology Training Institute (ATTIs) under the Integrated Roads Programme - one at Lushoto in Tanga Region and an other at Kiwira in Mbeya Region, where training of road foremen and inspectors from most of the regions in Tanzania has been underway for some time now. The third course at ATTI Lushoto was completed in September 1995 and the second in Mbeya at the end of March 1995 and the second in Mbeya at the end of March 1995. Some 80 supervisors have completed such training. The next courses at both the ATTIs should start



towards the end of 1995, but there have been considerable funding and equipment delays, a problem that is yet to be overcome. After the training, the supervisors return to the Regional Engineer's Offices, where they proceed with their old assignments but equipped with new skills.



Most of the recent training has concentrated on rural roads rehabilitation and improvement. In future, more emphasis will be placed on maintenance and contract supervision, as more work is put out to tender.

At present, a common technical and training manual is being produced together with the labour-based Contractor Training Project that is tailored to local conditions in Tanzania. With the resignation of CTA (er Erik Winberg in April, project backstopping has involved consultants Gary Taylor and John Marshall, who have focussed on the development of a National Labour-Based Programme to commence 1996/97.

ATATAP has also organised awareness-raising seminars all over the country.

## **Rural Transport**

The ILO has been involved in the implementation of a number of Integrated Rural Transport Accessibility Planning Projects in a number of countries. One of them, at Makete, has been the subject of a good deal of interesting research and analysis. The experience gained from the practical work carried out in Makete has led to the development of a planning framework of integrated transport interventions. The ILO has synthesised the experience gained from studies of rural transport patterns and implementation of related interventions into simple guidelines. Guidelines on considerations of gender issues in Rural Transport Planning have also been developed (first presented in a workshop on June 16, 1994). These guidelines will be presented to planners and engineers from the districts that have been selected to implement the Village Travel and Transport Program (VTTP).

## **ILO/NCC Contractor Training Project URT 90/004**

The ILO/NCC Contractor Training Project is establishing a labour-based contracting capacity in several regions, in addition to building the capacity within the national Construction Council (NCC) to continue with further training of contractors in other regions. The project is about to complete its third year, with four groups of six contractors trained, most are ready usefully engaged in rehabilitation, maintenance and spot improvement works.

The ILO training team has also recently helped the NCC to undertake short-term contractor training development in Zanzibar for GTZ and similar training for SNV in Moduli district, Arusha Region.

The project is about to be expanded with funding from the National Income Generation programme to cover a second training camp in Mwanza Region and a programme for Arusha Region, based in Moshi. The Moshi operation will be run by five National Professional project Personnel recruited in October 1993. The two ILO experts Kwaku Osei-Bonsu and Htun Hlaing (ex-Lesotho; he replaces Joe Connely as Training Adviser) are now assisting the five NCC Engineers to establish the Mwanza camp. Investment funds for Mwanza Region will be provided by UNCDF and it is envisaged that a total of 18 contractors will have been trained by 1996. Under the current arrangement, ILO ceases to be the executing agency and instead assumes the role of a co-operating agency with NCC.

Mike Shone, Senior Technical Adviser ALIST, P O Box 210, Harare, Zimbabwe and Ørnulf Strøm, Technical Adviser, ALIST, P O Box 9212, Dar-es-Salaam, Tanzania

## Uganda

Uganda's transport system is extensive and includes of 29,000 km of trunk and rural feeder roads and approx. 20,000 km of community roads. Although the infrastructure layout appears adequate to facilitate movement between urban and rural areas, traffic volumes have since the mid 80's increased and a large portion of the road network has received only minimal or no maintenance at all over the last 20 years. The Government has therefore embarked on a transport rehabilitation project and intends to upgrade and maintain feeder roads in Mbale, Tororo, Pallisa and Kapchorwa districts in East Uganda as part of the project.



The project objectives are :

- to introduce labour-based, contractor-executed feeder roads maintenance and rehabilitation in the country
- to improve MLOG'S and District Administration's capacity to plan, manage and monitor feeder roads rehabilitation maintenance
- to rehabilitate and improve feeder roads and increase accessibility in the area
- to develop domestic contractor capacity through training and advice and offer employment opportunities in roadworks.

To achieve this the project is to

- rehabilitate 680 km of feeder roads in the four target districts
- establish a four year feeder roads maintenance programme covering 880 km
- establish thorough training, a feeder roads rehabilitation and maintenance capacity using labour-based contractors
- strengthen MOLG's and district's planning and monitoring capacity.

### *Progress to date*

In January 1995 Norconsult was commissioned by MOLG to provide technical assistance necessary to undertake the above mentioned tasks. However , due to delays in the release of the funds from the Donors the project start up has been slow.

The expatriate project team consisting of a Project Coordinator, a Construction / Maintenance Engineer and a Senior Training Engineer is supported by four local experts. It is the intention that these local experts should run the project for about two years after the departure of the expatriate team with minimal external support.

In the short time the team has been operating they have achieved the following:

- A road inventory has been compiled and roads requiring either rehabilitation or maintenance have been identified

- The contractors' equipment requirements have been evaluated and a procurement document has been issued
- The District Administrations' maintenance capacity and training needs for both district maintenance personnel, contractors and their supervisory personnel have been established
- Routine maintenance is now being undertaken by the District Authorities on approx. 50 km of roads
- A planning workshop was conducted at the end of July with participation of the project personnel, the district Administration and key officers of the MOLG. It was concluded that while the targets set for training of contractors as well as the rehabilitation and maintenance of roads may be met, it appears difficult to achieve sustainability unless District Administrations can be motivated and administrative routines streamlined.
- Contractors' Foremen and Assistant Foremen have been selected on the basis of available data and applications received following advertisement in the press.
- The contractor and foremen training is in progress and the demonstration site is operational.

Bruno Illi, Regional manager, Norconsult, P O Box 48176, Nairobi, Kenya.

## **Zambia**

Major changes in Zambia road sector. In the recent past, the Government of Zambia has been unable to fund road maintenance and rehabilitation programmes adequately; in real terms, the financing has diminished. This has been further compounded by the fact that not all the funds allocated in the budget were released for this purpose. A separate body and source of funding needed to be established to keep the Zambians 'on the road', and an autonomous Road Fund has therefore been set up. It will get most of its income directly from fuel levy and international transit fees as well as from donor funding. To govern this Fund, the National Roads Board was established in February 1994 but really started to operate in November 1994. Its role is defined as "administering and managing the Road Fund for the maintenance and rehabilitation of the road network in Zambia. In addition, the Board shall advise the Minister of Communications and Transport on road policies, and monitoring and co-ordinating the activities of Road Authorities. "So, the role of the Board goes all the way from giving advice to the Minister to actual co-ordination of road works and allocation of funds. Mr Carl-Erik Hedstrom is a member of the Feeder Road Technical Committee that works directly under the Roads Board, making recommendations about proposed plans for roads development and maintenance.

During the past few months, a number of maintenance contracts have been awarded, among them two labour-based contracts. One of the contracts will be executed as a training contract for four contractors who were trained at the Roads Training School (RTS).

### ***Project news***

The labour-based project in Zambia is called Labour-Based Component (3) of the road Sector Reform Programme financed by NORAD and has four components:

- Institutional Reform and Development
- Human Resources Development
- Labour-based Techniques
- Emergency Releasing

After its mission in Northern Province was completed, the project was transferred to Lusaka in June 1994. The project has now merged with the Roads Training Schools and operates under the auspices of the Ministry of Works and Supply/Roads Department. Its main objectives are:

- to train Roads Department staff, as well as staff from other organisations involved in road works
- to effectively apply labour-based techniques of road rehabilitation and maintenance nationwide.
- to develop a contractor capacity by training small-scale contractors for road works and consequently develop a capacity within the private sector for the application of labour-based road works by demonstrating the technical and economic competitiveness of labour-based methods.
- to strive to ensure that labour-based technology is adapted by the Roads Department for rehabilitation and maintenance in all appropriate situations of the road network in Zambia.

During 1994-1995, five road/culvert courses, with altogether 56 participants from all the nine provinces, were conducted. A further 35 senior staff from the provinces have been participating in seminars. The demand for training is presently higher than the RTS's capability, since other organisations would like to utilise the training school. During the coming year there will be an acute need for expansion since the RTS will provide labour-based training for a UNDP-funded road-rehabilitation project in the eastern province.

*Carl-Erik Hestrom, CTA, Roads Sector Reform Programme, P O Box 30918, Lusaka, Zambia*

## **Labour-Based Project in the Copperbelt**

The Labour-Based Project on Road maintenance has successfully taken off with the help of FINNIDA. FINNIDA has offered assistance in providing tools, implements and equipment along with other day-to-day organisational requirements. However, payment to participants in the project is made by the Zambian Government through the Provincial Roads Engineer for Copperbelt Province. Currently, the project is being carried out in Ndola Rural, where road maintenance and regravelling are being done. It is hoped that the project will be sustained, given that it started with the basic wage paid by the Government.

Jared Musonda, Executive Engineer, Ministry of Works and Supply, Private Bag 15, Ndola, Zambia.

## **Zimbabwe**

The labour-based road rehabilitation and maintenance project in Zimbabwe has slackened its pace due to the lack of a clear developmental policy, a lack which has resulted in funding problems as the financiers have become uncertain about the continuation of the programme. However, it is generally agreed that the future of the programme lies in private-sector involvement. Recently, in an effort to resuscitate the labour-based programme in line with its overall reform programme, the Government of Zimbabwe of Zimbabwe requested ILO/ALIST to facilitate a Labour-Based Contracting Seminar for the Department of State Roads' Provincial Road Engineers. The Seminar approved the need to transform the operations of labour-based projects from direct labour to small-scale contracting, and a plan of action was drawn up, together with a time-scale in which to effect this move. The Government is in the process of producing the details of the project document.

The DANIDA-supported Labour-Based Pilot Project was successfully concluded in June 1994 (project duration: 1991-1994) having rehabilitated 160 km of the rural feeder road network and created

employment of more than 560,000 mandays in the project areas. The project-review report recommended an expansion of the technology to rural feeder roads in Zimbabwe wherever it was deemed appropriate. However, this could not be implemented immediately, due to the restructuring exercise. The two units established under this project continue to operate marginally, without proper co-ordination or adequate Government funding.

The DANIDA-supported Pilot Project produced tangible results in the form of economically rehabilitated roads that conform to the Department of State Roads' Technical road Standards. The project also encouraged most Department of State Roads Engineers to accept labour-based road rehabilitation as a sustainable concept suitable for Zimbabwe.

In addition, because of the apparent success of the Pilot Project, the Government of Zimbabwe and SIDA agreed to support two additional labour-based units outside the Pilot Phase. They were started in 1993 and are still operating modestly under direct labour supervised by SIDA-funded consultants. A review mission was sent in by DANIDA to review the progress made by these two units. The mission will, on the basis of its review, draw up strategies for future DANIDA involvement in the labour-based road construction and maintenance activities of the Department of state Roads.

The Project Co-ordinator, Mr Peter Bentall and the Field Engineer, Mr Jon Hongve, have left the project at the end of their contracts. The SIDA-funded Field Engineer, Hans Bergman, was replaced by Asfaw Kidanu, who will assume the role of the overall Labour-Based Adviser for the Department of State Roads. Two local Engineers, Victor Magaya and M. Chaka, have been moved from labour-based sites to the head office. It is anticipated that this reorganisation exercise will bring the project back on track.

*Collins Makoriwa, Technical Adviser, ILO/ALIST, PO Box 210, Harare, Zimbabwe.*

Project news is based on contribution from various field personnel in the respective countries. Thank you for all your letters.

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### Technical Enquiry Service (TES)

The Technical Enquiry Service (TES) provides technical information and publications on labour-based road construction and maintenance to projects, training institutions contractors, engineers and other interested parties.

TES has a collection of over 4500 published and unpublished documents on labour-based road works and related subjects, which include technical manual, training material, textbooks, project reports, etc. A document database is maintained to facilitate quick and easy access to the collection. TES also has links to other information resources around the world and maintains contacts with experts in the field that can be called upon to provide technical advise or information.

If you require information on labour-based technology, send an enquiry to TES by mail, fax, telephone, telex or e-mail or call in personally (Monday - Friday 08:30 - 16:30).

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