

## **1.1 A study of labour-based contracting commissioned by the ILO**

*Alex Twumasi-Boakye, Deputy Director Planning, Department of Feeder Roads, Accra, Ghana*

### **1.0 INTRODUCTION**

Many African countries have a pre-independence experience of the use of labour-based methods especially for routine maintenance and minor rehabilitation works. The technical ministries/departments operated through direct labour (force account) systems. However, the immediate post-independence era, from 1960, introduced the use of heavy equipment for road maintenance works. Up to the early 1970's the heavy (imported) equipment produced satisfactory results, and the small networks of roads were well maintained.

However, the need to either upgrade or expand the existing road networks using (imported) heavy equipment against the backdrop of the oil glut of the mid 1970's created serious problems for the fragile economies of several countries on the African continent. Many African governments resorted to seeking donor-support to fund the increased volume of work on roads. Unfortunately, however, donors were more sympathetic to major reconstruction and rehabilitation works. The result was that even though more roads were added to the maintainable network, routine and recurrent maintenance were neglected.

An attempt to solve the routine maintenance problem was the initiation of the Kenya Rural Access Roads Programme in the mid 1970's. This involved the use of labour based methods by the Ministry of Public Works direct labour (force account) for rural roads maintenance.

In the past, the reconstruction, improvement and periodic maintenance of roads have been undertaken by equipment-based contractors; routine and recurrent maintenance, was however undertaken by Government departments through direct labour (force account) equipment-intensive operations. Most of the major road works have been undertaken by large international contractors with very little involvement of the local contractors. Inadequate Government budgetary allocations for direct labour routine and recurrent maintenance works have also contributed significantly to the lack of maintenance of roads. It is evident that Governments are more willing to pay for contracts than direct labour works which, obviously, show a lot of wastage of resources. The World Bank, recognising the effectiveness of the labour-based approach to maintenance, especially by contract, included it in its Road Maintenance Initiative (RMI) in the Sub-Saharan Africa Transport Programme (SSATP). Thereafter the Bank sponsored the labour-based contractor development programme as the feeder road component of the 4th Highway Project for Ghana.

The move towards the privatisation of road maintenance works is further strengthened by the various Structural Adjustment Programmes which require Governments to drastically reduce the number of civil servants (called re-employment in Ghana). The staff reduction/retrenchment/re-deployment has affected the technical departments as well; hence direct labour works have suffered.

It is, therefore, no wonder that after Ghana's experience, several other donor-supported labour-based contracting projects have sprung up in Africa. With the exception of South Africa, the projects have been on rural roads. In South Africa, in addition to roads (municipal and rural), labour-based contracting has been applied to buildings, water supply (reticulation) schemes and power supply.

Even though there are similarities in the application of labour-based contracting methods, it is evident that there are still many differences which could be resolved if there were good co-ordination of the various practices, possibly through the issue of a set of guidelines. The ILO has initiated action in this direction by:

- collecting data on country experiences, (April-May 1995)
- promoting a workshop to prepare an outline for a set of guidelines (Nov-Dec 1995), to be followed by,
- the production of a set of guidelines.

It is hoped that the outcome of this seminar will assist in improving the contents of the Guidelines.

## **2.0 COUNTRY EXPERIENCES**

### **2.1 Introduction**

Since the mid 1980's, the International Labour Organisation (ILO) has carried out country-specific projects to develop a private sector capacity for labour-based works. The experiences on the projects identified the following as some of the problems which impede the establishment of a viable and sustainable contracting system:

- a) contractors' lack of financial management;
- b) inadequate client systems to ensure transparent contract award, timely payment and adequate monitoring and control, and
- c) procedural issues relating to :
  - i. comprehensible project documentation;
  - ii. contractors access to equipment and tools, and
  - iii. the client's capacity for the administration and supervision of contract.

The solution to the above problems lies in the availability of realistic guidelines for the planning and implementation of small-scale contractor systems. To achieve this, the ILO is sponsoring a three-phased study to collect and collate data from existing projects and produce Guidelines for project formulation and implementation.

The first two phases of the study, i.e.

- a) data collection and collation, and
  - b) workshop to draft an outline of the Guidelines
- have been completed.

This paper reports on:

- a) some of the observations made in Phase I of the study which covered projects in Ghana, Kenya, Uganda, Lesotho, South Africa and Tanzania, and
- b) the outcome of the ILO-MART Workshop (phase II)

### **2.2 General observations**

The following general observations were made during the study :

- a) the environment for the application of labour-based technology varies from country to country. These differences must be appreciated and understood in project design

and implementation. The wholesale replication of the experience of one country in another is therefore not recommended;

- b) except in South Africa where the experience has been in urban infrastructure (roads, water and electricity) and buildings, the experience in all the other African countries has been on rural roadworks with governments as the employer. There are, however, some similarities in principle between the method applied in South Africa and that of the other countries, especially Ghana and
- c) irrespective of their country, small scale contractors have very similar needs, expectations and potential to develop. Educational background does not make any difference: business acumen is the main requirement for success.

## **2.3 Ghana Labour-based Feeder Roads Programme**

### *2.3.1 Background*

The Ghana labour-based feeder roads programme was started in July 1986 as a component of the Fourth Highway Project under the sponsorship of the International Development Association (IDA). The following were the objectives of the programme:

- a) to improve accessibility to rural areas through the large scale application of a cost-saving approach to feeder (rural) road construction, improvement and maintenance, using local resources;
- b) to create a capacity within the Department of Feeder Roads (DFR) to manage labour-based contractors;
- c) to create the capacity for private contracting firms to efficiently apply labour-based methods to road construction, improvement and maintenance, and
- (a) to generate rural employment opportunities.

In order to achieve the above objectives:

- a) DFR and contractors' supervisory staff were trained in the application of labour-based technology for the rehabilitation and regravelling of gravel-surfaced roads;
- b) each contractor was provided with light equipment and assorted hand tools estimated at US \$150,000;
- c) each trained contractor was assured of contracts for the first 48 months after training, i.e. the equipment loan repayment period, and
- d) in order to facilitate the design and supervision of works, DFR was provided with technical and logistic support.

### *2.3.2 Training*

The following selection procedure is followed:

- a) In the beginning (1987 and 1988), newspaper advertisements were put out for applicants. Thereafter, the practice was discontinued due to the large number of applications;

b) the applicant receives an application form and returns it after responding to the questionnaire.

c) the application is then evaluated against set criteria.

The labour-based training started in April 1987. A common training programme was run for the DFR and the contractors, each of whom sponsor four (4) supervisors. It lasted for about eighteen (18) weeks. The initial training covered the rehabilitation and regravelling of gravel surfaced rural roads. However, in 1993, a short, 3-week training programme, specifically designed for routine and recurrent road maintenance works, was introduced. The contractors who were trained earlier were invited to avail themselves of the opportunity for routine maintenance training. By February 1995, the programme had trained eighty one (81) contracting firms for roads rehabilitation and regravelling. Six (6) of the firms are owned and managed by women.

### *2.3.3 Contractor Profiles*

The selected firms were generally small companies engaged in such businesses as trading, farming, the running of small restaurants, and small building and civil engineering contracting. Fifty-five percent (55%) of the Managing Directors have basic education, about ten percent (10%) each are civil engineers and other graduates, with the rest being technicians.

The selection of firms was based on a few years of demonstrated competence in some construction works and a registered office in the project area. After training, most contractors have performed very well, though a few have done badly. The payback rate for the loan has been slower than expected, though repayment is in progress.

### *2.3.4 Arrangements For Contractor Support*

Tools and equipment are advanced to each trained contractor as a loan which is administered by a Bank. The loan is repayable within forty eight (48) months. Each trained and equipped contractor is awarded a contract of about US \$240,000 each year, for the loan repayment period. The contract may be for either rehabilitation/regravelling or a combination of rehabilitation/regravelling and routine/recurrent maintenance works.

By March 1995, approximately 1300km of rural roads had been rehabilitated at an estimated cost of US \$12,000 per kilometre. That created 3.5 million mandays of employment. About thirty percent (30%) of the labour force were women. Funding for tools and equipment has been provided by the International Development Agency (IDA of the World Bank), Danish International Development Association (DANIDA), United States Agency for International Development (USAID) and the Government of Ghana (GOG). Technical assistance has been provided by the ILO with funding by the United Nations Development Programme (UNDP). The civil works contracts have been funded by DANIDA, USAID and GOG.

### *2.3.5 Contract Documentation and Administration*

FIDIC conditions of contract (3rd Edition) with provision for formula (automatic) price adjustment and some adaptations for labour-based works are used.

As a policy, the DFR awards contract to each trained labour-based contractor until he fully repays the equipment loan. This policy, however, is in conflict with the principles

of competitive tendering. Two (2) previous attempts to introduce competitive tendering failed due to the operation of cartels. The current system is that the DFR develops schedules of rates and negotiates them with the Labour-based Contractors Association. Serious consideration is however being given to organising competitive tendering for those contractors who have fully repaid the equipment loan.

Contract documents are generally prepared in house by DFR staff, since there are few or no competent local consultants for the technology.

The Employer is the Ministry of Roads and Highways, the Engineer is the Director of Feeder Roads and the DFR Regional Engineer is the Engineer's Representative.

Contracts are awarded by the Regional Tender Boards.

## ***2.4 The Kenya Contractor Training Project***

### *2.4.1 Background*

The Minor Roads Programme (MRP) of the Ministry of Public Works and Housing of Kenya which was started in 1987 succeeded the Rural Access Roads Programme (RARP) of 1974. By 1995, both programmes had constructed/rehabilitated/maintained about 11,000km of roads by labour-based methods using force account (direct labour).

Contractors were, however, engaged to haul gravel over long distances.

Drawing on the successful experience gained in the force account with (haulage) subcontract arrangement, the MRP decided to promote labour-based contracting with the following objectives:

- (a) to generate more rural employment;
- (b) to promote the growth of small scale local contractors who would compete for future contracts;
- (c) to bring the skills and experience developed in labour-based techniques by the MRP into the private sector and
- (d) to counteract the shortage of appropriately equipped contractors for road gravelling which had led to a lack of competition and high contract rates.

In 1991, the MRP received funding from the Swedish International Development Authority (SIDA) for the labour-based contracting project, with the following (narrow) objectives: "To establish guidelines for the selection, training and supervision of small, local contractors in labour-based gravelling operations".

Initially, the project was designed to regravell 96km of roads without any provision for training. This anomaly was later rectified.

The project did not provide any equipment for the contractors.

### *2.4.2 Training*

A total of twenty four (24) contractors were expected to be trained in two (2) phases. Three (3) of the twelve (12) contractors selected for Phase I withdrew at various stages of the programme; of the nine (9) contractors who successfully completed the training programme, only six (6) won contracts. Phase II of the project would involve the training of twelve (12) more contractors and staff of the Ministry of Public Works and Housing. Invitations to participate in the labour-based contractor training programme were advertised in the local newspapers. Applicants were evaluated for :

- a) qualifications of Managing Directors, preference being given to civil engineers;
- b) background and experience of firms;
- c) equipment holding (especially tippers and tractors).

Foremen were engaged separately by the project and trained, to be engaged later by the trained contractors.

The training programme lasts 15-21 months. Section 1 (theoretical) lasts 3 months, while Section II (practicals) lasts 12-18 months. Training Section II involves:

- on-the-job training (fixed rate contracts for all contractors), estimated at US \$40,000.
- 1st trial contract (11 contractors tendered for 7 contracts), estimated at US \$70,000 and
- 2nd trial contract (9 contractors tendered for 6 contracts), estimated at US \$80,000.

As an improvement, in Phase II, each trainee foreman was attached to an experienced supervisor for a short period, prior to the formal training. Each trained contractor was also allowed to sponsor two (2) assistant foremen for training

#### *2.4.3 Contractor Profiles*

Contractors were selected mainly for their educational qualifications (mostly engineers and technicians) and resources and experience as established contractors.

Even though the curricula vitae of the trained contractors have been boosted, there have been no substantial changes in the contractors' profiles due to the lack of continuity of labour-based work.

#### *2.4.4 Arrangements for Contractor Support*

The future market has not been assessed; however, it was concluded from the Phase I training that labour-based contracting is viable in terms of value for money, available network offering potential candidate roads and large availability of labour in the project areas. However, there is no continuity for further contracts.

#### *2.4.5 Contract Documentation and Administration*

The contracts are based on FIDIC with additional special clauses. Standard tender and contract documents were developed during contractor training. The traditional method of fluctuation reimbursement (by receipts) is applied.

Contracts are awarded to tenderers who quote  $\pm 15\%$  of the Engineer's estimate. In Phase I of the project, the staff of the Ministry of Public Works and Housing were not involved in the tendering and contracting processes. This arrangement created administrative problems. To solve the problem, District Engineers (DMIE) and their staff were later given formal hands-on training in tender documentation and evaluation and contract administration.

The Employer is the Government of Kenya, the Engineer is the Chief Engineer of MOPWH and the TA is the Engineer's Representative.

## **2.5 The Tanzania Labour-based Road Contractor Training Project**

### **2.5.1 Background**

The Labour-based Road Contractor Training Project, which is a part of the Integrated Road Project, is financed by the UNDP, IDA, USAID and the Government of Tanzania. The Government implementing agency is the National Construction Council (NCC), with TA provided by the ILO. The programme started in October, 1992.

The objectives of the project are to establish :

- a) a labour-based contracting capacity in two (2) regions for the execution of road rehabilitation and maintenance works, and
  - b) the capacity, within the NCC, to continue with the training programme.
- Initially, the project was planned for rural road maintenance. However, when it was discovered that most of the roads were not maintainable, the emphasis was changed to the rehabilitation of earth or gravel surfaced rural roads.

### **2.5.2 Training**

Between January 1993 and June 1995, twelve (12) contractors were trained for each of the two (2) project regions: six (6) contractors are trained at a time.

The training programme has been divided into three (3) phases:

1. classroom training (6 weeks)
2. field training (14 weeks); and
3. trial contract (6 months).

Each contractor sponsors 3 (originally 5) supervisors.

After the trial contracts, the successful contractors are registered as labour-based contractors. The field training is undertaken with hired equipment. The contractors also use hired equipment for their contracts.

### **2.5.3 Contractor Profiles**

Each of the selected firms for the first batch was a registered building contractor with some construction equipment and landed property.

After training, a typical contractor can turnover US \$60,000 per annum, employing about 70 workers per day.

### **2.5.4 Arrangements for Contractor Support**

Even though the future market has not been assessed, it is reassuring that the Government of Tanzania has a policy of privatisation with donor-support for labour-based road works.

### **2.5.5 Contract Documentation and Administration**

FIDIC (3rd Edition) Conditions of Contract, with some adaptations for labour-based works, are used. A new ("user friendly") document has been proposed for use. The new document is based on "The Administration of Labour-intensive Works Done by Contract" by Philippe Garnier and Marc Van Imschoot.

The traditional system (i.e. evidence of receipts) of fluctuation reimbursement is applied. Plant hire rates are included in the Basic Price List.

The Ministry of Works, Communications and Transport (MWCT) represents the Employer, with the Regional Engineer as the Engineer. During the trial contracts

(training) stage, the NCC is the Managing Contractor who subcontracts the trial contracts to the trainee labour-based contractors.

However, the labour-based contractors are the Main Contractors on the standard contracts. During contract execution, the labour-based contractor is advanced 15% of the contract sum for mobilisation. Another 15% is advanced directly to equipment suppliers on behalf of the contractors.

## **2.6 The Uganda Labour-based Programme**

### **2.6.1 Background**

The Ministry of Works Transport and Communications (MOWTC) which is responsible for highways in Uganda introduced labour-based routine maintenance contracts in 1992, as part of the Interim Maintenance Project. Among the policy reforms of a powerful Inter-Ministerial Steering Committee was "As far as possible, to use small labour-based contracts for routine maintenance operations; force account to be used only where labour-based contracts were not practicable".

The World Bank-supported Transport Rehabilitation Project (TRP: 1995-2000) which aims at achieving the following objectives, further reinforces the use of labour-based contracting:

- a) to introduce labour-based methods of road maintenance and feeder roads rehabilitation wherever most cost-effective;
- b) to improve MOLG's (Ministry of Local Government) and Local Authorities (Districts') capacity to plan, manage and monitor feeder roads rehabilitation and maintenance;
- c) to improve feeder road network accessibility in 4 districts; and
- d) to train, advise and employ domestic small- and medium- size contractors for feeder road works.

The following targets are to be achieved:

- a) the rehabilitation of 680 km of feeder roads in 4 districts;
- b) the introduction of a 4-year feeder roads maintenance programme;
- c) the establishment, through training, of a feeder roads rehabilitation and maintenance capacity using labour-based contracting in 4 districts, and
- d) strengthening the planning and monitoring capacity of MOLG.

The project will provide some light equipment, vehicles and tools to the contractors through either a leasing company or a bank. The MOLG will provide regular and continuous work to the contractors during the loan recovery period.

### **2.6.2 Training**

The trainee contractors will be selected on the basis of qualifications of the Managing Directors, equipment holding and experience of the firms.

The contractor training will consist of a 2-week introduction on a demonstration site, to be followed by a 4-month detailed site training.

The successful trainees will be given their first contract.

The training of MOLG and District Administration staff will run in parallel with the contractor training. The full implementation of the project was about to start by May, 1995.

## **2.7      *The Lesotho Labour-based Contractor Training Project***

### *2.7.1 Background*

Lesotho's experience of labour-based road works by force account dates back to 1977 when the Labour Construction Unit (LCU) was set up in the Ministry of Public Works. In order to ensure sustainability, reduce government establishment, achieve greater efficiency, and generally to be more cost-effective, the Lesotho government decided that labour-based road works must be privatised.

As part of the Infrastructure Rehabilitation and Maintenance Project, the ILO was tasked to study the domestic contracting industry. The study resulted in a document titled: Entrepreneurship Development for Labour-based Road Maintenance. The ILO was again commissioned to produce training material, coordinate equipment procurement and train twelve (12) small scale contractors in labour-based road maintenance. The small scale contractor training programme started in April 1993.

The trained contractors were expected to arrange privately for their equipment and tools.

### *2.7.2 Training*

Invitations to participate in the training programme are advertised by radio and newspapers. Trainees are then selected after a series of tests, interviews and verification of furnished information.

The training programme is made up of theoretical and field sessions, lasting about ten (10) months.

The Road Maintenance and Rehabilitation (ROMAR) and Improve Your Construction Business (IYCB) documents, sponsored by the ILO, were used for training; the former, for technical and the latter, for management training. Only the Managing Directors of the firms are trained.

Trial routine maintenance contracts are awarded to the trainees on fixed rates bill of quantities, after the field training in regravelling. The contractors ballot for the projects. Trial regravelling contracts were awarded after the trainee contractors had tendered for them. The tender sums should fall within an acceptable envelope of  $\pm 5$  percent of the Engineer's Estimate. Contractors whose tenders fall outside this envelope are awarded contracts at the Engineer's Estimate.

During the trial contracts :

- a) LCU force account labourers are seconded to the trainee contractors;
- b) contractors are paid labour advance plus 10 percent margin;
- c) each contractor is given a set of tools to be repaid, from the contracts;
- d) any additional equipment is rented by the contractor; and;
- e) each contractor employs about 60 operatives for regravelling.

After the trial contracts, the successful contractors tender for regravelling contracts.

### *2.7.3 Contractor Profile*

The backgrounds of the Batch No.1 trainees varied from primary education to engineering degree. The Batch No.2 trainees had better academic qualifications: in addition, each had a bank account, though not a healthy one.

It is a bit too early to assess the contractors' standing at the bank. However, the acquired knowledge will enhance the chances of the contractors in securing contracts outside the project.

### *2.7.4 Arrangements for Contractor Support*

All trained labour-based contractors are guaranteed routine maintenance contracts which are funded fully by the Government of Lesotho (GOL). Due to constraints in funding, fewer regravelling contracts can be awarded (with World Bank funding) than the number of trained contractors. This situation may worsen as the contribution of GOL to funding for regravelling increases.

The Lesotho Highlands Authority is a possible source of work for the trained contractors.

### *2.7.5 Contract Documentation and Administration*

A simplified form of contract, for labour-based works, is in use. Some inconsistencies in the conditions of contract suggest that the document may not be thorough enough.

In view of the low rate of inflation in Lesotho there is no provision for fluctuations in the contracts.

The contract documents need further testing to facilitate fair comments.

The LCU is responsible for control and payment.

A contractor is entitled to a mobilisation advance payment against a Bank guarantee.

When the Bank issues the guarantee, it opens 2 accounts for the contractor - an Advance Bank Guarantee Account into which the advance is paid, and an Operational Account from which overdrafts are given to the contractor. The advance money is not released to the contractor until he has completed the contract and repaid the loan. The Bank uses the advance money as collateral for the overdrafts. All contract cheques are paid into the Operational Account.

## **2.8 The South Africa Contractor Development Programme**

### *2.8.1 Background*

In South Africa, the building and construction industries are dominated by enterprises which are mainly owned and directed by the white sector of the population, due to previous socio-political arrangements in the country. To address the imbalance, the construction process must be modified to facilitate the creation and development of small scale contractors within the disadvantaged communities.

'Community-based construction' may be defined as:

"The use of labour-based technologies and labour-intensive methods on projects in which the community is, in addition, involved in the commercial, managerial and administrative aspects so as to maximise the amount of funds retained within the community and to transfer skills and competencies to the community".

One of the several contractor development programmes is the Soweto Contractor Development Programme (CDP) which is founded on the above principle. The programme was started in mid-1988 by the Soweto Municipal Council. The Objectives

of the Programme are to plan and execute local construction projects by applying labour-based technologies and labour-intensive methods such that:

- a) employment and entrepreneurial opportunities are created for members of the community;
- b) skills and competencies in technical, commercial, managerial and administrative areas are transferred to participants; and
- c) the percentage of the construction cost retained by the community is maximised.

These objectives accord with the provisions in the Reconstruction and Development Programme (RDP) of the South African Government; hence the enabling environment has been established.

The following have been identified as barriers which prevent small entrepreneurs from engaging in civil engineering construction:

- tendering and contractual requirements e.g. tender rates, the provision of securities and penalty clauses;
- design based on plant-based construction practices;
- lack of financial resources to purchase materials, hire plant and tools and to pay wages;
- lack of commercial, managerial and administrative skills;
- discontinuity of work; and
- lack of technical competence.

The above barriers may be reduced by:

- employment of labour-based technologies;
- provision of access to resources;
- provision of developmental assistance; and
- structuring of contracts.

Therefore, in order for communities to participate in construction, there should be changes both in the construction method and process.

In an attempt to create jobs for local entrepreneurs, the following are some of the ineffective approaches which are followed:

- inviting open tenders from eligible contractors (there are no black registered contractors);
- insisting that local contractors be engaged as sub-contractors (no such sub-contractors are available); and
- including clauses in contracts which make it obligatory to use local materials or plant (does not necessarily involve communities in the management of construction). Local entrepreneurs from underdeveloped (black) communities cannot engage in construction without development support and the acquisition of external resources.

Three possible methods are applied in the Soweto CDP. These are:

- a) The Development Team Approach
- b) The Managing Contractor Approach
- c) The Mentoring Approach

**(a) Development Team Approach**

In this method, experienced and suitably qualified people assist the contractors in the following areas :

- administration and management of the contract;
- offer of technical training; and
- engage of specialist contractors.

The local contractor enters into a contract with the Client while the Development Team is appointed on a fee basis, directly by the Client. The following constitute the Development Team:

- the Design Engineer
- the Engineer
- the Construction Manager, and
- the Materials Manager

The Design Engineer and Engineer are respectively responsible for the pre-tender design and supervision of the works.

The Construction Manager:

- advises and offers site assistance and training;
- provides plant apart from small tools;
- arranges for specialist works;
- arranges the payment of fortnightly/monthly wages; and
- transports materials to site (Level 1 contracts only).

The Materials Manager,

- provides all materials (Level 1); and
- provides most materials (Level 2), and
- makes materials available for purchase (Level 3).

Materials are supplied to the client at cost i.e. net of discounts.

Construction and Materials Managers may be either engineering contractors or project managers of consulting engineers.

**(b) Managing Contractor Approach**

In the Managing Contractor system, the Client enters into a contract with an experienced conventional contractor who administers, manages, finances, trains and supplies materials and equipment to a labour-based nominated sub-contractor.

**(c) Mentorship Approach**

The Mentorship Approach is applied to Level 4 and 5 contracts. In this system, qualified people are employed as consultants on a fee basis, to help emerging contractors to:

- acquire the necessary skills to win competitive tenders;
- improve their management and business skills, and
- acquire and develop improved competence in contract management.

The development support to the community from each of the above methods is flexible and can be revised depending on the needs of the community.

By the end of January, 1994, the following had been achieved in Soweto:

- 215 km of secondary water mains had been laid;
- 19,500 housing plots had been re-plumbed; and
- 30,000m of roads had been upgraded, by community based contractors at approximately R44 million (US \$12.25 million).

The Development Bank of Southern Africa (DBSA) assisted the Soweto Municipal Council with funds for the first phase of the CDP.

#### **Levels of Contract**

A Contractor Development Programme (CDP) is structured in levels of contract in order to afford small contractors with different capacities and sizes of business, the opportunity to enter and leave the programme at various stages. In addition, the levels of contract must be so structured that those contractors who leave at any level can perform without developmental support while the support will be reduced for those remaining in the programme at each successive level of contract but with increased responsibility and risk.

The following 5 levels of contract are proposed:

- Level 1      Labour only
- Level 2      Labour plus transport of materials to site
- Level 3      Labour plus transport plus materials (assisted)
- Level 4      Labour plus transport plus materials (unassisted)
- Level 5      Labour plus transport plus materials plus full surety.

In order to encourage contractors to progress to higher levels, the following rules are applied:

- a) Contractors within the programme can only tender for one level of contract above and one level below the highest level of contract at which they are currently operating, or where they have operated at in the past.
- b) No contractor within the programme may tender for a Level 2 contract unless he has completed 2 Level 1 contracts.
- c) No contractor can undertake more than 3 Level 1 contracts and a total of 5 Levels 1 and 2 contracts.
- d) No contractor can undertake more than 3 Level 3 and 4 contracts and 2 Level 5 contracts.
- e) Contractors who have worked outside the programme can enter the programme at any level provided that they have suitable contracting experience to operate at that level, whereupon they would be subjected to the above mentioned rules.

#### *2.8.3 Contractor Profiles*

The trainee contractors were either small building or civil engineering contractors, or former supervisory staff on labour-based projects or contractors' labourers. They had very little or no knowledge of business and were very weak financially.

From small, single-man firms or no firms at all, several of the contractors have become either small well organised contractors or subcontractors or pools of foremen for other contractors. A trained contractor may undertake contracts in roads, water, electricity or housing, depending on his level.

#### *2.8.4 Arrangements for Contractor Support*

So far there have not been enough jobs for the contractors. However, the situation is expected to improve in the near future.

#### *2.8.5 Contract Documentation and Administration*

The following forms of contract are used, as appropriate :

- a) General Conditions of Contract for Works of Civil Engineering Construction, 6th Edition (1990), or
- b) General Conditions of Contract for use in connection with Electrical and Mechanical Works, 1st Edition (1985)

### **2.9 Peculiar Issues of Interest**

#### *2.9.1 The Ghana Programme*

- a) Light equipment and tools are provided for contractors through loans administered by banks at an average bank interest rate of 35% (1996);
- b) Contractors are guaranteed contracts (no competitive tendering) to enable them repay the equipment loan; and
- c) Funding for the programme is mainly donor-driven.

#### *2.9.2 The Kenya Project*

- a) The labour-based technology for road works has been popularised in the country side through force account operations;
- b) The roads are not compacted;
- c) Funding for the training programme is donor-driven;
- d) In the selection of trainees, emphasis is placed on the qualifications of the Managing Directors of the firms. Foremen are trained separately and transferred to the trained contractors;
- e) Standard open tendering is applied - continuity of work is not assured; and
- f) The annual rate of inflation is 26%

#### *2.9.3 The Uganda Project*

- a) The MOWTC does not share its experiences on labour-based routine maintenance (petty) contracts with MOLG;
- b) The trained contractors will be equipped by the project; and

- c) The Technical Assistance (TA) team includes 3 local consulting engineers. This arrangement will promote technology transfer.

#### *2.9.4 The Tanzania Project*

- a) The NCC staff on the project are given special remuneration as an incentive;
- b) The contractors are expected to either own or rent light equipment for their work; and
- c) Up to 30% of the contract sum is paid as mobilisation and plant advance.

#### *2.9.5 The Lesotho Project*

- a) Only the Managing Directors of the contracting firms are trained.
- b) Trained contractors are guaranteed routine maintenance contracts;
- c) The selection criteria exclude big contractors;
- d) No equipment provided for the contractors.
- e) The annual rate of inflation is 7-10%, and
- f) The technology is popular in the countryside due to the experience in force account of the LCU.

#### *2.9.6 The South Africa Programme*

- a) Contractors are trained for several types of work;
- b) Training includes management support;
- c) The provision of training is project-related: therefore a contractor without a project may not have the opportunity of being trained;
- d) For each construction contract, separate (about 3) contracts are signed with the consultants in the Development Team;
- e) The administration of the Contractor Development Programme is almost entirely in the hands of a few external consultants;
- f) Labour is very expensive in South Africa (about US \$10.00 per day), so the alternative efficient use of equipment may pose a threat (financially) to the labour-based technology, especially for road works, and
- g) The Development Team Approach (DTA) will be sustained so long as the big firms used as Construction Managers do not feel threatened by competition from the small labour-based contractors. As the big firms face competition from foreign firms for large contracts, they may turn to the otherwise less lucrative small labour-based contracts.

### **3.0 KEY ISSUES**

In the course of the assignment of the 3-man ILO Mission, four key issues were identified as having a very significant impact on all labour-based projects. These are:

- Project Preparation;
- Training;
- Contract Documentation, and
- Detailed Implementation

#### **3.1 *Project Preparation***

The following issues need careful consideration:

- a) Whether the project is conceived as a result of government policy decision or as a condition of external financing, the appropriate enabling environment which will ensure continuity must be established;
- b) The project objective needs clear definition and ideally should be linked to contracting industry development;
- c) Project identification/appraisal needs to demonstrate early cooperation between governments and donors;
- d) Preparation needs to be thorough in terms of both overall concepts and practical detail. Local knowledge and previous project experience are essential if all components of a project are to be adequately addressed;
- e) There is no 'ideal' implementation formula and thus preparation needs to include the necessary flexibility for learning and adjusting to differing circumstances;
- f) There are inherent dangers in suggesting a complete translation of a project from one country to another, and
- g) Genuine, active government commitment is essential for anything sustainable to be achieved and this needs to be harnessed in the very early stages of preparation.

#### **3.2 *Training***

The following are important :

- Training is often seen only in terms of the needs of the project and not in a broader, longer term context;
- The training approach may be limited to enabling contractors to enter the real competitive world in the shortest possible time or to continue structured support as they gain more experience;
- Careful thought should be given as to who needs the training, e.g. contractors; supervisors; clients' staff; technical and/or administrative personnel. Needs should be assessed;

- Much training material exists which is widely relevant and which can be supplemented with locally specific additions;
- Training is a specialist activity; it should be given adequate status and carried out by appropriately trained trainers. Too often it has a fairly low priority in a project;
- To be sustainable, local training institutions (not necessarily technical) should be involved since they should have the professional expertise to ensure the appropriate level of training;
- Undergraduate/postgraduate courses need to include technology choice/appropriate technology for engineers to be introduced to these ideas at an early stage, and
- Feedback from trainees is an essential part of the development of good training programmes. Some of the training is seen as non-relevant while in other cases serious gaps are identified.

### **3.3 Contract Documentation**

The main issues worth noting in Contract Documentation are:

- There is no consistency of approach to contract documentation within the projects studied;
- Many documents would have doubtful legal validity if challenged;
- There are no examples of labour-based contractors fully exercising their contractual rights (for fear of alienating their only Client);
- Either (inappropriate) FIDIC Conditions are used or locally written compilations which lack legal consistency;
- Uganda has the only example of good purpose written routing maintenance documents (but even these omit some fairly important clauses);
- No project uses 'minor works' conditions produced, for example, by the Institution of Civil Engineers (UK);
- Even simplified documents need to include clauses to cover basic contractual responsibilities;
- Ultimately it should be possible to design projects 'neutrally' to be equally suitable for a labour-based or equipment-based approach. Engineers should be aware of steps that could be taken towards this objective;
- An (official looking) ILO document containing suggested contract conditions is being given more importance in this area than was probably intended, and
- The whole question of appropriate documentation for labour-based works needs a good deal of further work.

### **3.4 Detailed Implementation**

- The Client management needs to be fully integrated into, and to take responsibility for the project implementation. There are a number of ways of ensuring this.
- The question of the choice and use of Technical Assistance needs serious review in the changing circumstances in Africa.
- The contractor's access to tools and equipment may be critical to the success of a project but there are key decisions to be taken regarding, for example, the financial liability against continuity of work.
- All projects are delayed to a greater or lesser extent by existing procurement procedures to the general frustration of all parties concerned.
- The identification and selection of contractors is important if the objective of 'contracting industry development' is to be fulfilled.
- Projects vary as to the amount of contractor support that is given during and after the project and this is an area of serious debate and differing views.
- The administration of contracts in terms of payment procedures; terms and conditions of employment; and negotiations over fixed rates, is an area requiring particular attention.
- The selection of roads and standards of construction need specific criteria which are agreed at an early stage since a purely economic assessment is rarely appropriate for the type of roads under consideration. Standards are also subject to political pressure.
- Public Relations exercises and the extensive use of the media are recommended to make the general public more aware of the importance of good road access and maintenance.
- Labour-based projects can be an excellent vehicle for the formal introduction of internationally recognised labour conventions.

## **4.0 THE ILO-MART WORKSHOP**

### **4.1 Introduction**

The ILO-Mart Workshop on Labour-based Small-Scale contracting for the Roads Sector held in Zimbabwe from 27 November to 1 December, 1995, represented Phase II of the ILO project referred to in 1.0 above.

The objectives of the Workshop were:

- a) To discuss the key issues identified in the ILO Study Report (Phase I).
- b) To produce detailed recommendations and an Action Plan for the content and production of the guidelines.

## **4.2 Outcome**

The following were some of the key issues discussed:

- a) The definition of the target audience for the guidelines and therefore the decision to have two parts (institutional and operational), or even two separate documents (for policy makers, and for programme designers and implementors).
- b) The importance of the creation of an 'enabling environment' if small-scale contracting is to be sustainable; and an analysis of "the market".
- c) 'Protection' for small-scale contractors, its advantages and disadvantages, and the ultimate objective of releasing them into the free market, competitive environment;
- d) The concentration on the roads sector as being the major potential market at present, but also the importance of enabling contractors to move freely into other appropriate fields to avoid a continuing 'one Client' situation;
- e) The importance of the contractors having a 'voice' through well established Contractors Associations;
- f) Many initiatives are only 'project' oriented and this is one reason for the failure of any significant expansion of "a contracting market" in labour-based construction works'
- g) What is the justification (or otherwise) for 'affirmative action' (e.g. in South Africa) to promote labour-based contracting?
- h) What is the role of Academic and Professional Institutions (Centres of Excellence) in achieving sustainability?
- i) The critical importance of sustainable maintenance strategies.
- j) The lack of any serious initiative to develop any local 'consulting' capacity in most countries; and
- k) The lack of data from elsewhere to match the 'African' experience.
- l) MART and ILO were assigned to write proposals for producing the Guidelines with a view to soliciting the additional resources needed. The preliminary indications were that the Guidelines might not be ready before the end of 1997.

## **5.0 CONCLUSION**

The ILO's programme for labour-based contracting is well on course. The MART Workshop on tools and equipment held in the past few days is complementary to the ILO initiative. Everyone who sympathises with the system anxiously looks forward to seeing the Guidelines in print, hopefully by 1998. Meanwhile, some countries have either started, or are at the threshold of starting, projects which require the use of labour-based contracting:

What do they do?

I wish to suggest, in conclusion, that new entrants must:

- a) Draw on the experiences of the 'older generation' of projects/programmes, visits are recommended;
- b) Be guided by the 'Key Issues' listed in 3.0 above.
- c) Pay particular attention to the following:
  - Enabling environment: Governments and implementing Agencies must be fully and practically supportive of the system.
  - The type of, and arrangements for securing, light equipment and tools;
  - Types of contracts: conditions of contract must be less complicated to be understood by the small contractor. The caution must be given that in our attempt to 'simplify' the forms of contract, it must be realised that contracts are designed to avoid, and to be used in the determination of, disputes. Therefore, the 'simple' contract should follow this principle. It should not be assumed that we are dealing with a 'small' contractors: nothing prevents a small contractor from seeking expert legal advice when the situation so demands.
  - Technical assistance should be fully competent for labour-based works. If ILO published a list of labour-based experts for use by prospective clients, it would be very helpful.
  - The importance of local financial institutions in either managing equipment loans, or providing overdraft facilities or securities, must be recognised.

Sustainability.