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MEN OR MACHINES?

An Evaluation of Labour Intensive Public Works in Lesotho.

By Geoff Edmonds, Karlis Goppers, Mikael Söderbäck.

SIDA

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MEN OR MACHINES?

An Evaluation of Labour Intensive Public Works in Lesotho

This report is the result of an evaluation mission to Lesotho in April 1985. Apart from the three authors the mission also included Mr Athanasius Lehobo. Formally responsible for conclusions and recommendations of the report are Messrs Geoff Edmonds and Karlis Goppers, while Mr Mikael Söderbäck, being associated with the project, took part in the mission as a resource person.

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LESOTHO

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MEN OR MACHINES?

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SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Sweden has supported Lesotho's Labour Construction Unit, the LCU since 1978. A total of SEK 25 million has been paid out until July 1984 and another 24 million allocated for 1984/85-1986/87. A first evaluation was carried out in early 1981 and the present mission visited Lesotho in March - April, 1985. The members of this evaluation mission were Messrs Athanasius Lehobo (Government of Lesotho, GOL), Geoff Edmonds (International Labour Organisation, ILO), Karlis Goppers (SIDA) and Mikael Söderbäck (SIDA).

Findings and Conclusions

As in 1981, the mission's findings are that the Labour Construction Unit (LCU) has implemented a series of labour-intensive construction projects to a satisfactory technical standard and at a competitive cost. However, the broad objectives in relation to large scale employment promotion have not been achieved. This can to at least some extent be explained by the fact that sufficient funds have not been allocated by the Government of Lesotho (GoL).

The operation is efficiently run. Although productivity has declined slightly in recent years, the cost of the road works was reasonable and the standard of construction was found to be good. Certain specific improvements could, however, be made in the construction techniques. The level of planning and reporting were satisfactory. It must, however, be remarked that 80 per cent of LCU's operations remain in road construction and maintenance, despite several studies having shown that other types of projects, e.g. soil conservation, can yield higher employment effects.

The LCU has not realized its objectives in the area of training, nor has it been possible for the LCU to fill management positions with local staff. After eight years, the operation is still being managed entirely by an expatriate consultant firm; the cost of technical assistance having increased, rather than decreased, in recent years.

Very little has been achieved in respect of long term primary objectives, which are to create as much employment as possible and to promote and propagate the use of labour-intensive methods within all public works of the government of Lesotho.

This was already noted by SIDA's own evaluation mission in 1981 which recommended similar remedies to those proposed by the current evaluation team. Other evaluations have made the same point. There has been an inability to act on earlier proposals on the part of both the government and donors. However, the governments increasing awareness of the potential of the LCU and the need for a clear policy in relation to it, is reflected in recent policy documents.*

We have, moreover, found that the selection of workers employed in LCU projects is generally made on a political basis, with the ruling BNP favouring its own supporters. Over 80 per cent of the employees are said to be members of the BNP. This political bias does not accord with Sweden's general goals of development. There do exist simple recruitment procedures used in labour-based programmes elsewhere which could eliminate this bias.

As for the impact of the roads built, no conclusive cost-benefit analysis has been made. There are, however, many indicators that the roads have been of considerable benefit to the people living in the areas concerned. Due to the new roads, a number of services are now available to villages that were previously isolated.

*) G.O.L. Ministry of Works. The History, Current Status and Proposed Future Policy and Development of the Labour Construction Unit. Feb 1985

Recommendations

The mission is convinced there is considerable scope for increased use of labour-based methods at competitive costs in Lesotho. It would be possible for the Government to integrate and co-ordinate labour-intensive construction techniques in all public works, thereby attempting to increase employment in the country. We propose that each Ministry develops its own capacity to utilize labour-based techniques.

When decentralized labour-based construction units are to be set up, there will be need of a considerable amount of technical and other assistance. For this purpose we propose that an advisory and co-ordinating unit be set up within the Central Planning Ministry, the CPDO, and that a co-ordinating committee, consisting of the Secretaries of State from all the concerned ministries, be reinstated.

The central advisory unit within the CPDO would be responsible for co-ordinating, planning, and advising all the other ministries in everything concerning labour-intensive construction work. At the same time, it would act as a secretariat for the co-ordinating committee. This means that a part of the present responsibility of the LCU would be transferred to the CPDO unit. During this process the operational capacity of the LCU would be gradually taken over by Roads Department.

We further agree with the proposal that the special labour intensive training unit, the LITU, which is presently being set up, shall have the specific task of training future trainers, rather than trainees. This unit should be a central training unit and not part of the LCU. It should come under the auspices of the advisory unit within the CPDO.

As far as the LCU is concerned its integration into the Roads Department should be accompanied by a clear definition of a yearly work programme which would be monitored and controlled in the same way as the other branches in Roads Department.

Each ministry involved in infrastructure works should now prepare a list of projects, which could be carried out by labour-based techniques. These would then be passed to the advisory unit within the CPDO which could assess their validity and advise on possibilities for implementation.

As mentioned above, several of the conclusions and recommendations put forward in this evaluation report, are strikingly similar to those of the mission which visited Lesotho in 1981. It is hard to judge whether this should be viewed as an inability on the part of both the Government of Lesotho and the donors to act on the findings of the earlier evaluation, or whether a bureaucracy simply needs time to institute changes.

The latter view seems to be supported by the following statement, which somehow symbolizes the entire findings of both missions. One of the officials we interviewed in Lesotho said:

> "Your mission should make the same recommendations all over again. This time we are much more mature and conscious of these issues and we would, therefore, definitely be able to implement such recommendations this time."

1 INTRODUCTION

Since 1978, Sweden has supported the development of labour-intensive methods of construction in Lesotho, by financing projects carried out by the Labour Construction Unit, the LCU. In recent years, Sweden has also financed the technical assistance provided by a consultancy firm.

Up to July, 1984, total Swedish support amounted to SEK 25 million. A further sum of SEK 24 million has been agreed on for the period 1984/85-1986/87.

In April, 1981, SIDA conducted an evaluation of its support to the LCU. The main conclusion of this mission was that most of the specified goals had been attained. According to the existing Specific Agreement between the Governments of Lesotho and Sweden, a new evaluation was to be conducted early in 1985. This report is based on the findings of that evaluation mission.

The evaluation is intended to provide a basis for consultations between the two Parties in order to review the ongoing Programme and agree on a plan of work and a budget for the financial year 1985/86. This evaluation is also supposed to provide a basis for discussions on possible continued Swedish support in the area of labour-intensive methods of construction.

Objectives

The objectives of the present evaluation mission were defined as:

* To evaluate the Swedish support given to the LCU during the period 1981-1984, in relation to the overall aim of this programme of development co-operation, i.e. "to increase employment for the rural population by creating labour-intensive construction methods".
* To evaluate the performance of the LCU with regard to the cost-effectiveness of labour-intensive methods of construction as well as the socio-economic benefits resulting from the construction programmes.

* To appraise the short and long term potential of labour-intensive methods in general, and in particular, to create productive employment in Lesotho. Special consideration should be given to the possibilities of rapidly increasing employment in case of emergencies and to the introduction of labour-intensive construction methods in sectors other than road building.

Time schedule and reporting

The evaluation mission visited Lesotho during two weeks in March and April, 1985. The members of this team also participated in a seminar on feeder roads held on the 18th and 19th March, and organized jointly by the ILO and the Government of Lesotho.

The Mission made several field trips and had meetings with the Prime Minister's Office, with relevant ministries and government bodies as well as with donor representatives.

Members of the evaluation mission were Messrs:

Mikael Söderbäck, Civil Engineer, Industry Division, SIDA;

Karlis Goppers, Economist, Research Division, SIDA;

Geoff Edmonds, Civil Engineer, Technology and Employment Branch, ILO;

and

Athanasius Lehobo, Civil Engineer, Labour Construction Unit, LCU.

Formally responsible for the conclusions and recommendations of this evaluation report are Messrs Geoff Edmonds and Karlis Goppers, while Mikael Söderbäck and Athansius Lehobo, both being associated with the LCU-project, took part in the mission as resource persons.

2 OBJECTIVES OF THE LCU

The primary long term objectives of the LCU are firstly, to promote and propagate the use of efficient labour-intensive methods in all public works in the Government of Lesotho, and secondly, to create as much gainful employment as possible in the country, especially for returning migrant workers.

The immediate goals or production targets of the project include a series of objectives pertaining to the setting up and running of an efficient labour-intensive construction programme. The only firm indication of GOL's plans for the future of the Unit were contained in the Lesotho Third Development Plan for the period 1980-1985 (pp 244 and 245):

Labour-intensive work; gravel pit on the Phamong-Nohana road.

"The target for the Labour-Intensive Construction Unit in the Third Plan period are to increase activities so that at the end of the period the Unit will have a strength of 3,500 men and will have an absorptive capacity of 10,000 men through an emergency/contingency plan.

Two Labour-Intensive Groups (LCGs) of 700 men each will be set up in 1980/81 and one 700-man LCG will be added in each year of the Plan from 1982/83 on. The strength of 3,500 men will thus be achieved."

The Plan then went on to list the projects intended to provide the workload of the Unit until 1983.

Sweden's motives for aid to Lesotho

Sweden has four general objectives regarding co-operation with developing countries. They are to promote:

* economic growth;
* a more equal distribution of income;
* the economic and political independence of the recipient country, in this case, Lesotho; and
* the development of democracy in that society

In each particular project one or more of these objectives of development co-operation is seen as relevant. In the case of Lesotho, Sweden has traditionally regarded the third objective, the promotion of economic and political independence, as overriding.

Just as in the case of Botswana and Swaziland, since the inception of the programme, Sweden's motive has been to prevent the Republic of South Africa from strengthening its grip on the BLS states, through an international presence, including that of the United Nations.

This should reinforce Lesotho's own efforts to keep the apartheid regime at arm's length. More specifically, it should help Lesotho to be able to serve as a free haven and a transit country for refugees from the Republic.

Thus, Sweden's financial support to Lesotho could be seen as an integral part of her foreign policy stance towards South Africa. It follows that foreign policy

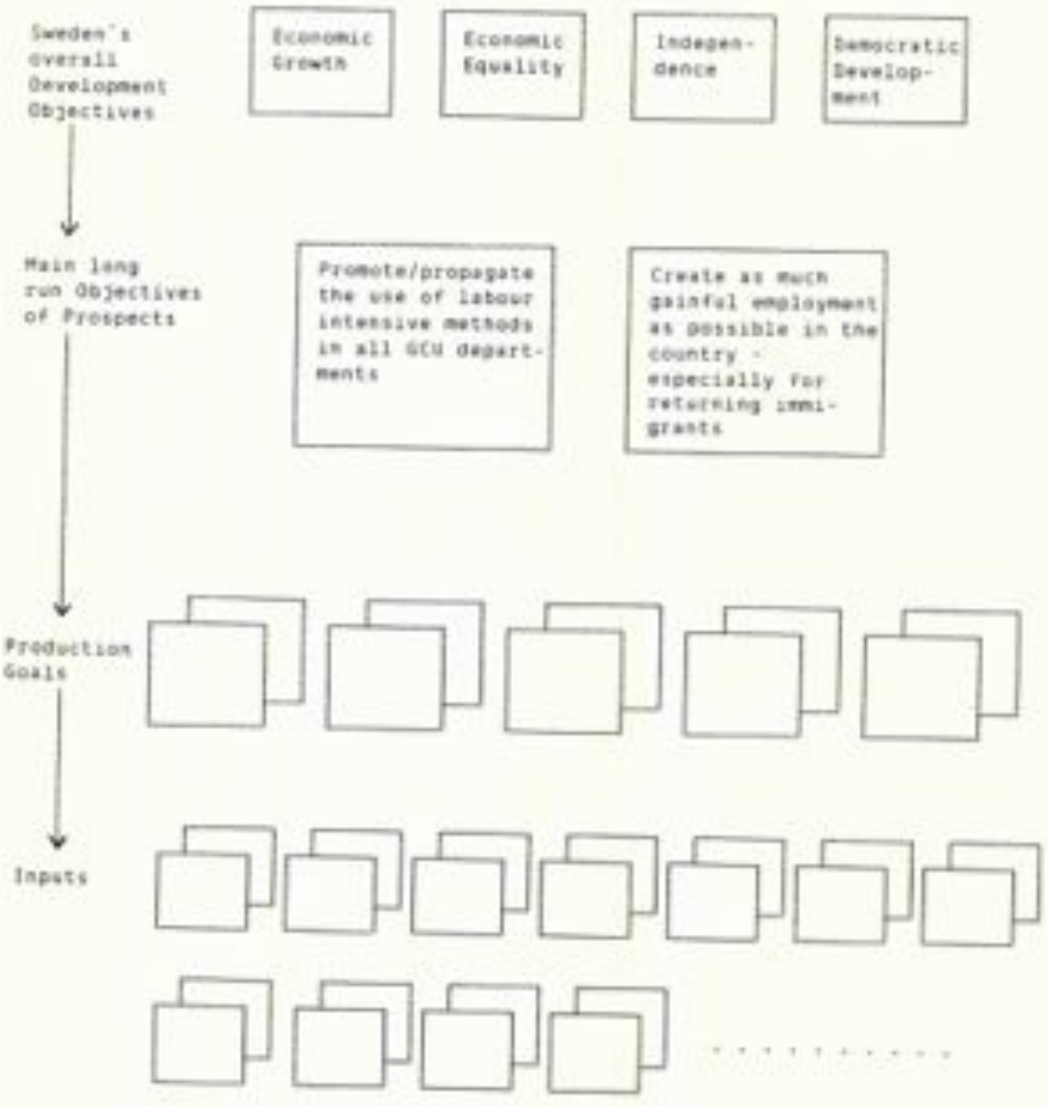
criteria, in addition to those of Sweden's policy of development co-operation, govern Sweden's decision to continue and even to increase her support to Lesotho.

In recent years, however, the goal of economic growth has gained importance. Whilst the Government of Lesotho strives to be politically independent, it is fair to say that it remains economically dependent upon its neighbour.

In the report of the evaluation mission which follows, although the third development objective, the promotion of Lesotho's independence, is of overriding importance and is in itself sufficient to warrant Sweden's support, the achievements of the LCU in respect of the other three goals will also be evaluated. Although the promotion of independence is the objective which is crucial to Sweden's overall decision to support Lesotho, the other three objectives of development co-operation carry weight in deciding which projects within the total development programme should be continued and which should not.

The complete hierarchy of goals, against which the LCU project should be evaluated, can be schematically presented as in Figure 1.

FIGURE 1 - THE HIERARCY OF DEVELOPMENT GOALS



3 ACHIEVEMENTS, PRODUCTION GOALS, EFFECTS, IMPACT

Generally speaking, this evaluation mission has found that the LCU has been able to build infrastructure works effectively and efficiently using labour-based techniques. The LCU has shown a serious attitude to its work, which the generally high quality of the constructed roads bears witness. These results are similar to those of the previous mission of April, 1981.

Both within the Government of Lesotho and in the donor community, the opinion is generally held that the construction work performed by the LCU is efficient. This is also reflected in the fact that LCU has easily attracted donor funds to its projects.

The LCU roads are seen to be on a par with roads elsewhere in the country, whether they were constructed by labour-intensive or other methods. The impression of this evaluation mission, whether acquired through interviews with various technicians or through on-site inspection, does not conflict with this opinion.

Some points of caution should, however, be raised. Maintenance of roads is a big problem in Lesotho and there are indications that widespread maintenance requirements may also pose important problems in the future. Together with other questions, this point is further developed in the chapter on the productivity of the LCU, which follows this one.

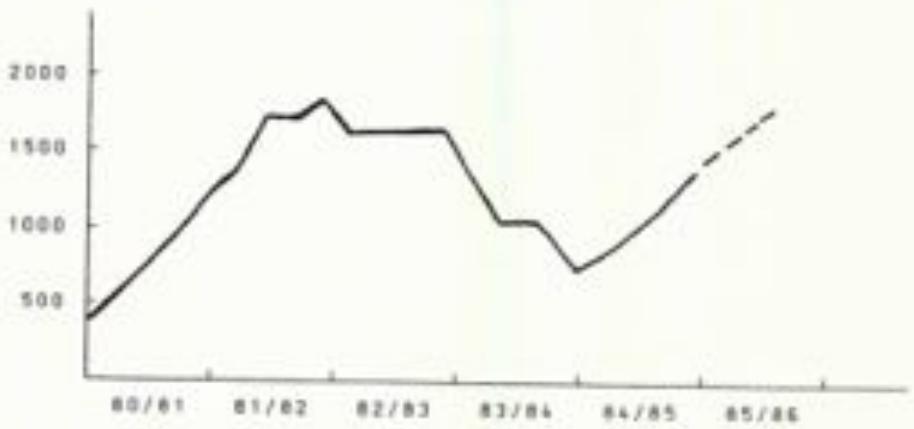
The overall cost structure in the operations of the LCU seems to be sound. Overheads such as transport and management have been kept within reasonable bounds.

When it comes to the realization of the main long term objectives, however, little has been achieved. The LCU has, thus, not succeeded in creating as much gainful employment as possible nor in promoting and propagating the use of labour-intensive methods in government departments. It deserves to be pointed out, however, that to a large extent, this failure can be explained by the simple fact that the Government of Lesotho has not allocated sufficient funds to this activity.

Employment effects

The below diagram shows that since LCU left the pilot project phase on 1980/81 and entered into the development phase, the number of people employed by LCU has varied considerably. In 1983/84 there was a very marked slump. Today's upward trend is promising, but existing funds will probably not be sufficient to increase employment above the level attained already in 1981/82. Beyond 1985/86 there is considerable uncertainty with regard to financing.

FIGURE 2: NUMBER OF PEOPLE EMPLOYED BY THE LCU 1980/81 - 1985/86

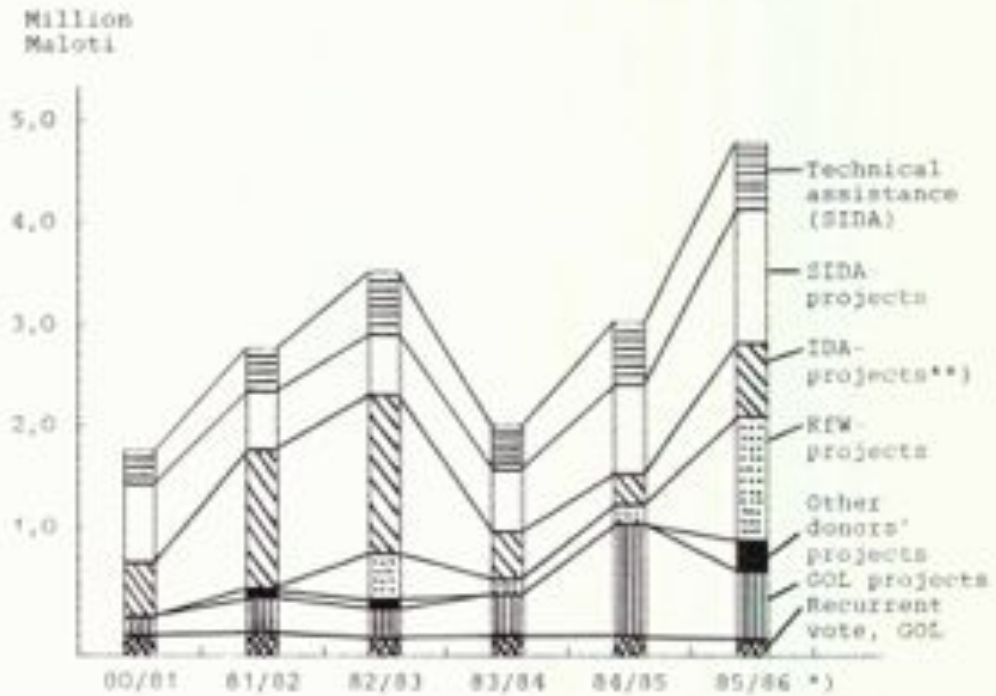


The main reason for the variation of employment level is that the LCU is heavily dependent on donor financing. There is no long term programme of work. To a considerable extent, the LCU functions as a contractor looking for work, above all, amongst the donors. This leads to great uncertainty and, as a result, difficulties regarding resource planning.

An example of the insecurity endemic to the LCU is the situation of 1983/84 - 1984/85 when several projects expected to be financed by donors were delayed for several months. This led to a problem of over-capacity of technical assistance.

The financing of the LCU operations is illustrated in the below diagram. The diagram shows that the contribution by the Lesotho government is quite limited.

FIGURE 3: FINANCING OF LCU OPERATIONS 1980/81 - 1985/86



*) Forecast excluding bridge and office projects
**) Include SIDA-funds for Maseru Urban Projects

It is unclear to what extent the responsibility for the failure to achieve the long-term employment objective of the LCU can be attributed to the managers of the LCU, but this question is somewhat academic, since factors external to the LCU are primarily responsible.

These factors can be summarized under the heading of "Lack of interest/initiative/decision/attention" primarily on the part of the Government of Lesotho, but are perhaps also indicative of a lack of interest and concern on the part of donors.

The mechanisms required to attain long term objectives have been identified by previous evaluation missions including the Swedish mission of April, 1981. There has been time and opportunity for both donors and the Government of Lesotho to introduce such mechanisms. At least one donor, SIDA, has failed to act in this important matter, although the requisite information has been available.

One of the main mechanisms identified four years ago which would introduce a massive spread of labour-intensive methods throughout the administrative apparatus, was the proposal to instal a Labour Construction Adviser in the Office of the Prime Minister. He would have the responsibility of promoting and co-ordinating the use of labour-intensive methods in all public works.

In addition, it was proposed that the Co-ordinating Committee, consisting of the Permanent Secretaries of the concerned ministries which had been set up during the pilot stage of LCU, should be instituted on a more permanent basis. The main task of this committee would be to provide political backing and authority for the proposals and recommendations put forward by the above-mentioned Labour Construction Adviser.

The existing committee was abolished during 1981/82. It is not completely clear to this mission why this happened nor why the recruitment of a Labour Construction Adviser has been so much delayed. Nor is it possible for this mission to acquire a deep understanding of the inner workings of the Government of Lesotho and, therefore, of the efficiency and relevance of such a committee.

With the information available to us it is, however, our firm conviction that both the Committee and the Labour Construction Adviser are necessary if the main objectives

are to be attained, irrespective of whether the Adviser is placed in the PM's office or, as is currently proposed, within the CPDO.

The second major external factor affecting the realization of the long-term objectives, is the organizational position and status of the LCU.

From the start in 1977, the LCU has been delegated the responsibility of constructing the public works of all ministries, not just roads, even though it may have been at least implicitly understood that road construction would be one of the most important areas. Today road construction amounts to more than 80 per cent of LCU's entire operations, though it is unsure whether roads should be its only or even most important sector.

Looking at the scope for possible public works in other ministries, (e.g. soil conservation, terracing, irrigation and other water works) it may be argued that the long-term potential for expansion of labour-intensive construction techniques lies primarily in the agricultural sector. Be that as it may, it seems to be the historic attachment of the LCU to the Ministry of Works, which explains LCU's present concentration on road building.

There are several options for how labour-based construction methods could be spread to other sectors than road building. These options are described and evaluated in Chapter 8, where also recommendations are given in order to achieve the longterm objectives.

The impact of the project on target groups

In a country like Lesotho where there is no widespread corruption, a public works scheme is of direct benefit to the target group of otherwise unemployed labourers. This income is still only a fraction of what the same labourers could earn in the mines of South Africa, but is more than they would be making in a job in the private sector.

Without the existance of the LCU, they would probably be out of work, since so few jobs are available in Lesotho.

It may be worth looking at which unemployed labourers get LCU work. Such statistics have not been made available to our mission, but according to reports, a substantial proportion have previously worked in South Africa. This indicates that the project is fulfilling one of its stated objectives, that of providing alternative employment within Lesotho for people who might otherwise seek work in South Africa.

One might, however, raise the question of whether these workers, who could reasonably be expected to be financially better off through their previous earnings, ought to be recruited by the LCU. Perhaps it ought to target on workers who are preparing to seek work in South Africa for the first time.

Selection of projects

On the question of what people and which villages benefit from the LCU projects, it should be pointed out that there exists no complete national road plan. A general plan does exist for the primary and some secondary roads. However, for the majority of the road network, no detailed plans exist. Until recently for example, the Ministry of Cooperatives and Rural Development (MCRD) had little knowledge of the 1500 Kms of minor roads that constitute the Feeder Road Programme.

The African Development-Bank is financing a study through the Ministry of Works which is designed to provide a plan for feeder (i.e. non-primary) road development up to the year 2000. Given that many of these roads are exactly the ones for which labour-based techniques would be approprate, it is clear that the future role of LCU within road construction would be more clearly defined by this study.

The present lack of any clear plan for road development also affects the broad question of the overall economic cost and the benefit to society of building the road. It means that the selection of roads to be constructed by

the LCU tends to be rather ad-hoc and more related to the ability of the LCU management to attach funds for projects.

SIDA has not made any appraisals of the projects to which SIDA-funds have been allocated as is normally done by other donors. Instead, SIDA has virtually dealt with this development co-operation as a mere budgetary support.

The most important projects financed by SIDA are two gravel roads in the southern part of the country: the Seaka-Nohana road, which was built by the LCU during 1980-85 and the Dilli-Dilli-Sikonde road project which has recently been started. As far as the evaluation mission was able to ascertain, no feasibility study preceded the decision to build either of these roads.

The LCU does, however, always produce job reports. This technical analysis and calculation of costs forms the basis of the allocation of the projects to the LCU. It serves as a basis for the allocation of funds to the project and includes technical specifications.

When it comes to rehabilitation or regravelling of existing gravel roads, several studies have been made, mainly in connection with appraisals of World Bank Highway Loans. Although the basic assumptions have differed considerably, both in 1979 and 1984 it was found that regravelling projects offered reasonable internal rates of return on savings in vehicle operating costs (VOC) in relation to cost of regravelling.

Impact

As for the socio-economic benefits enjoyed by the people living in the areas where the LCU builds a road, this mission was unable to form its own opinion. From reading the documents prepared by other donor agencies and from interviews with government officials and foreign experts, our general impression is that the investments have benefitted those whom they are supposed to benefit, namely the large groups of relatively poor people in the country-side. We are not aware that any better-off elite has benefitted disproportionately.

The evaluation mission was given the opportunity of visiting part of the completed road to Nohana. It was able to ascertain on the spot that this project must be of great importance for the development of the entire area which now was open to traffic all the year round. According to information received, economic activities had increased markedly, for instance through the opening of daily bus services. According to reports, in the section where traffic flow is strongest, the number of vehicles has increased from an average of five to an average of 50 daily.

At present the consultants running LCU's planning division are conducting an impact study of the effect that the road construction schemes have had on the lives of the local population. Even though these case studies do not claim to be scientific, the answers received from the local authorities do give a picture of the situation before and after the roads were built. These replies indicate that the roads are of significant practical importance in the local community.

In the case of the Seaka-Nohana road, it is reported that the time taken to reach various destinations vital to the local people, has been cut by 30-40 per cent. Further, the following benefits were reported:

* Because of the ease of transportation of farming implements, farmers are now able to get their implements locally and at better prices. Before the road was built, this equipment had to be transported by donkey from Mt Moorosi and cross the Senqu by boat, which was very risky.
* The District Headquarters Staff makes frequent visits to these areas and hence are able to conduct follow-up visits to check on their work.
* Wool transportaion from the mountain areas of Nohama, Phamong, Tlaling, etc has been made much easier and faster. As a result, Ketane will have a Wool Shed very soon.

* Public transport has enabled farmers to get their inputs from town, including vegetable and high breed seeds of all types.
* The social behaviour of farmers has changed, due to being able to make regular visits to the foothills and lowlands. The time of sending one farmer to collect inputs is past, and everyone is exposed to Co-op Lesotho.
* In-service training for both Ministry extension agents and farmers is regularly held, because of the ease of travel.

Some negative effects were reported:

* The road is too narrow, hence accidents occur. It also has corners which are too sharp for large vehicles to negotiate.
* Maintenance is very poor and more manpower can make the road more manouvreable and hence save time.

Some suggestions for improvement were made:

The SIDA-financed Phamong-Nohana Road was built by LCU in mountainous terrain with several bridges and other structures requiring engineering skills.

* The road can be shortened in places to save time and fuel, e.g. between Khoal and Fika la Ts'oeng school.
* When maintaining the road, outcropping rocks should be immediately moved aside to avoid delaying traffic.
* Road signs should be set up to help drivers.

Various government departments testified that, due to the road having been built, a number of government services would henceforth be available to the villages concerned.

The Ministry of Co-operatives stated that:

"One of the selection criteria we use is that a village must be accessible to vehicular traffic year-round, if we are to construct a water supply. Therefore, the Seaka-Nohana Road has opened up about fifteen villages to the construction of water supplies in the period late 1984 through to the end of 1987."

The District Forest Officer stated that:

"The up-grading of the Seaka-Phamong road has facilitated the expansion of the Lesotho Woodlot Project's activities into an area of lowland and foothill which was previously denied to us."

"Since, and because of, the improvement of this road, we have been able to undertake extension work in a large tract of land immediately to the north of the Orange River. This extension has led to the obtaining of two areas now designated as forest reserves. At Letlapeng, planting is completed and management is in hand; at Lithipeng land preparation is still in progress."

"Meanwhile, offers of plantable land in the Shelane and Phamong areas are being inspected with an eye to planting in the coming year."

"From the project's point of view, the access now provided by this road is exceedingly important as it makes possible the transportation of large numbers of plants at realistic speeds, and permits freedom of access for regular follow-up and management."

A Rural Works engineer said that:

"The new road certainly improves our capability for implementing projects in the Phamong Ward of the Mohale's Hoek district. It has not only improved our supervision capability, but has also certainly extended the life of project vehicles."

A Roads engineer said that:

"The improvement and maintenance of the Seaka Bridge to Nohana road by the LCU has permitted us to expand the number of projects in the area, and will permit us to continue doing so. Of particular interest to us is the Ketane area where we had little or no interest up till now, because of the inability to bring in materials and equipment at reasonable cost. The completion of the road will now permit us to offer almost any variety of assistance to people in that area."

The District Medical Officer said that:

"The improved road from Seaka Bridge to Nohana has helped us a lot to serve our clinics at Lithipeng and Phamong and the IFDS clinic at Nohana better. The fact that even the Lesotho National Bus uses the road as far as Phamong is another help for our patients."

Amongst other things, the Regional Veterinary Officer said that:

"The road helps us to give a quicker veterinary service in the area. It helps to reduce the costs of vehicle maintenance and repairs. It reduces the time of transportation and the costs of bales of wool and mohair from the wool sheds in the area of Mohales Hoek."

Political recruiting

At this point an important negative aspect of the work of the LCU must be mentioned, namely that workers are selected for employment on political criteria.

Although this is officially denied, the authors have gathered sufficient reports and testimonies to clarify this point. It would seem that up to 80 per cent of the workers hired by the LCU are members of the ruling BNP.

Management is aware of the political recruiting, but is unable to do anything to change it. By law, it is required to hand over selection procedures to the local village development committee, which represents the BNP.

The village committee is contacted by a permanent secretary in the Office of the Prime Minister, who has the overall responsibility for recruiting workers for the LCU. It is given a quota of workers to fill. Non-members, who may belong to other political parties, seem to be able to gain employment only after all BNP members who are willing to take a job have already been employed.

The authors have also been told, in some cases by those concerned, that there are people who decided to join the BNP for the sole reason of applying for a job.

The authors wish to emphasize their opinion that this practice of the political selection of workers seems to contradict the principles of Swedish development co-operation and has no support in any of the project agreements between Sweden and Lesotho. Even though this practice is not unique to Lesotho, it would be desirable if it were to be terminated forthwith.

Contribution to Lesotho's economic development

Lesotho is a very small country, and though its total gainfully employed population is tiny (about 300,000 people), it is nevertheless true that the LCU with its 1,300 employees can only have a limited effect on the economy of the nation. We have already noted above that the LCU's operation is both efficient and cost-competitive. It follows, therefore, that the wages it pays and the work it carries out are genuinely positive contributions to the country's economy.

There are a few considerations to mention in this regard. One is the question of economic linkage effects or, as it is called in economics, the multiplier effect. Since most capital equipment is imported from South Africa, the more labour-intensive the operation, the more of the economic multiplier effect stays within Lesotho.

This advantage is naturally diminished to the extent that the food consumed by workers is imported from South Africa. The country's overall food self-sufficiency is today about 60 per cent in weighted terms.

The same reasoning applies to the indirect employment effects that are created when the LCU's workers need houses to live in, hand tools to work with, clothes to wear, etc. In very general terms, it is safe to conclude that the more labour-intensive the work process, the more likely it tends to be that the items demanded by the workers and the work process are produced within the country itself.

Production goals

We have concluded that the LCU has been efficient in building roads and other infrastructure using labour-based methods. It has been less than effective in relation to training component, which is dealt with in Chapter 6.

Sweden's objectives of development co-operation

With its efficient and competitive operations, the LCU does promote **economic growth** in Lesotho.

If it is true that the majority of the workers employed by the LCU are labourers who have worked for some years in the Republic of South Africa, thereby having acquired a certain financial well-being, we must conclude that our development goal of **economic equality** is not fulfilled to the same extent as if other categories of unemployed workers were employed.

We assume that the mere presence of a foreign donor in Lesotho does reinforce Lesotho's ambition to be politically independent of South Africa. However, the development of a capacity to build infrastructure using local resources is a specific measure to reduce dependence. We also draw the general conclusion that whatever economic activity, and preferably efficient economic activity, that takes place in Lesotho it does, in principle, add to the

country's economic independence. To the extent that the project is successful, the ability to employ returning miners also helps to reduce Lesotho's vulnerability to external forces.

A warning should be made here. There is a risk that Lesotho may become so dependent on economic assistance that its own development effort is stifled. If this happens, then the presence of foreign aid may contribute to a reduction in the country's economic independence, and not the other way round. There are, in our opinion, several serious indications that Lesotho is running the risk of becoming aid-dependent and it is an aspect on which the Government must keep a watchful eye.

The LCU project contains no elements which have a bearing on Sweden's goal of furthering democratic development in Lesotho.

Role of women in labour-intensive construction activities

During recent years, increasing importance has been given to the role of women in development. This issue raises several important points in relation to the LCU and to the food-for-work schemes under the MCRD.

While LCU in accordance with its objectives mainly employs returning or future mineworkers, most of the workers in the food-for-work schemes are selected among the poorer parts of the rural population and with a majority of quite young or elderly women. The contrast is striking when visits are made to LCU and MCRD projects. On hand there are the hard-working, experienced and highly productive male workers of LCU which receive all payment in cash for defined pieces of work. On the other hand the food-for-work schemes showing mainly female workers rather poorly equipped, supervised and motivated. These schemes have until lately been seen very much as "windows" for distribution of food to rural areas with a food deficit.

It is not strange that the LCU shows much higher levels of productivity and much better quality of work than the MCRD projects. The main reasons are probably the

much higher input of supervision within LCU and the effects of the two payment systems with regard to incentives to the workers.

We realize that the existing situation is mainly a reflection of the differences between the objectives of the different organizations and of the fact that according to tradition in Lesotho only men have looked for paid work externally. Still we feel that today's situation is undesirable as it reinforces these traditional patterns and conceptions about the role of men and women in society.

Experience from other countries, e.g. Kenya, shows that it certainly should be possible to attain a reasonably high level of productivity with a mixed work-force consisting of both men and women.

Women in all ages make up the majority of the workers employed on the MCRD food-for-works schemes.

We find that one way to gradually change the existing situation, would be to start experiments with mixed food and cash payment and a work-force consisting of both men and women with efficient supervision. Such experiments could be applied not only to construction of new projects, but also to maintenance of existing infrastructure. For example, the regular maintenance of gravel and earth roads with the so called length-man system could be quite suitable for this purpose.

4 EFFICIENCY AND PRODUCTIVITY

General

This chapter deals with the question of the efficiency with which the funds invested in the LCU have been utilized. The introduction of labour-based techniques into a country with little or no previous experience of these methods generally has three phases.

A pilot phase in which one is concerned not only to test the technical and economic efficiency of the methods, but also to modify and adapt as necessary the managerial, administrative and institutional framework, so that these methods can work effectively.

The second phase can be called the development stage, when an attempt is made to broaden the scope of the application the methods within the framework developed for them.

Finally, there is a full-scale implementation stage, when the methods are applied on a large scale. Naturally these three phases are not always well defined, with the pilot, demonstration and implementation stages often overlapping.

Nevertheless, the LCU fits into the scheme. The pilot phase between 1977-80 showed conclusively that labour-based techniques could be technically and economically viable for a wide range of activities. Based on these conclusions, the government decided to enter a developmental stage. In normal circumstances this stage should have been phased into a full implementation stage after 2-3 years.

Unfortunately, after five years the LCU still has not, for reasons described elsewhere, evolved into this final stage.

This section focusses particularly on the last five years, which followed the pilot stage. The latter can be judged a success and, in any case, questions of efficiency are viewed differently for the pilot stage. Thus, in

analyzing the period 1980-85, we have been concerned to view the LCU as an organization given the responsibility of executing the work, albeit in a framework which has constantly been evolving.

Nevertheless, the work of the LCU should be judged on its output related to investment. The fact that it uses a different technology, should be of concern in this analysis only inasmuch as it relates to the efficient use of available resources.

In brief, labour-based methods create employment. Therefore, if it is clear that they can provide a similar product at roughly the same financial cost, then it is clear that their use should be continued. On the other hand, if the quality is inferior and financial costs greater, then their use should be reserved for activities for which there is no alternative, e.g. self help or food-aided projects or small infrastructural works. In the case of inferiority of labour-intensive methods, the investment should either be used to create employment more efficiently elsewhere, or the funds should be used for equipment-intensive techniques.

Table 1 provides a summary of total expenditure, technical assistance and employment created for the pilot project period and the fiscal years 1981-85. The first point to make is that the LCU has led a hand-to-mouth existence. It has had a programme of work only inasmuch as it has been able to put together a group of projects. The output of the LCU is, thus, not an indication of efficiency, but of its ability to attract funds.

The increase in expenditure in 1982-83, for example, was due mainly to two projects, namely, the 3rd Highway Project and the Seaka-Nohana road improvement. The reason for the drop in expenditure in 1983-84 is the termination of the work under the 3rd Highway Project. Against this background, with the lack of a stable programme of work, the level of technical assistance has risen, in line with the government's stated policy of expanding the work of the LCU, a policy which has not been supported by concrete action.

TABLE 1: TOTAL EXPENDITURE, TECHNICAL ASSISTANCE AND EMPLOYMENT 1977-1985

	1977/80	1980/81	1981/82	1982/83	1983/84	1984/1985
Total expenditure (Mx10^6)[1]	1.18	1.25[2]	2.42	2.84	1.77	2.72
Technical assistance (at prevailing exchange rate)	0.42	0.25	0.38	0.55	0.39	0.63
Average employment created	490	700	1,650	1,650	1,070	1,110
Wage rate (M)	2.4	3.4	3.4	3.4	3.4	3.4
Expen/man-day employment[3]	4.1[8]	7.4	6.1	7.2	6.5	10.2
Technical assistance/ man-day employment[3]	1.5	1.5	0.95	1.3	1.5	2.3
No. of projects		10[4]	10[5]	10[6]	13[7]	
% expenditure on roads		82%	85%	93%	78%	88%
Recurrent expenditure			0.253	0.17	0.134	0.253

1. Excluding technical assistance
2. Excludes equipment purchase
3. Assumes 240 working days/year
4. 2 projects accounted for 72% of the cost
5. " " " " 75% " " "
6. " " " " 72% " " "
7. " " " " 60% " " "
8. Equivalent to M 5.8 at 1980-84 wage rate

Exchange rates

Financial Year*	1 Maloti = US$ 1
1978-1979	1.15
1979-1980	1.21
1980-1981	1.33
1981-1982	1.05
1982-1983	0.87
1983-1984	0.85
1984-1985	0.78

* 1 April - 31 March

The ratios of expenditure and of technical assistance to man-days of employment, provides one measure of the efficiency of the programme. In relation to expenditure the Unit has been consistent although, understandably, never achieving the efficiency of the pilot stage.

As far as technical assistance is concerned, the figures show that for the present workload, the unit is actually over-staffed. The management of the LCU, however, point out that the staffing level relates to the objective of employing 3,500 workers as per the Development Plan.

A disturbing feature raised in Table 1 is the reduction in the level of recurrent expenditure for the Unit from 1982-84, even though it is being asked to maintain an increasing number of roads. There has been a major increase for 1984/85, which needs to be sustained.

Productivity

Because the work of the LCU has principally been in road improvement, the analysis of costs and productivity has been confined to roads. Equally, of the completed projects between April 1980 and July 1984, totalling Maloti (M) 6.02 million, four projects accounted for 75 per cent of this total, namely:

The World Bank Third Highway Project;

BASP Roads, Berea District;

Seaka-Phamong-Nohana;

LTC Access Road.

A brief description of these projects is given below and Table 2 summarizes the costs and productivity and compares them with two projects from the pilot stage.

a) Third Highway Project

Two brigades, one in the north and one in the south, were responsible for the upgrading of existing tracks to Gravel 3 standard, which is the lowest gravel standard accepted by the Ministry of Works.

The brigade in the north was involved with relatively straightforward upgrading of 194 km of roads in lowland terrain. The Southern Brigade, however, had serious problems. The 35 Kms of road assigned to it required extensive reconstruction prior to regravelling. Communication with the sites was difficult and logistical problems added to the constrains. This is evident from the output and cost figures.

b) **BASP Roads, Berea District**

Started in early 1982 and completed in October 1983, the total cost of the upgrading of 22 Kms of existing tracks to Gravel 3 standard was M 500,103. Productivity and costs on this road were reasonable.

c) **Seaka-Nohana**

The upgrading to Gravel 3 of this 88 Kms FRP road began in May 1980, and the first phase to Phamong was completed in September 1982. Phase 2, from Phamong to Nohana started in October 1982 and was completed in March 1985. The project involved considerable drainage work and included major bridge structures.

d) **LTC Access Roads**

A smaller project of 7.5 Kms of upgrading to Gravel 3 standard started in June 1982 and was completed in September 1983. The haulage distance was long, 20 Kms, and there were a large number of structures. The present condition of the road is poor and this appears to be caused by lack of compaction in combination with a lack of maintenance.

TABLE 2: COSTS AND PRODUCTIVITY FOR MAJOR PROJECTS CARRIED OUT BY LCU

Date		Productivity m.d/km	Cost/km (Maloti)	At current price(US$)	Terrain type
1977/78	Mazenod-Moitsupele	1,538	7,456[1]	8,574	Rolling
1978/79	Masite Neh-Ha Muhaitane	1,739	8,760[2]	7,774	Flat
1980/83	3rd Highway RG I	1,189			Flat/Rolling
	" " RG II	2,743	7,257[3,4]	7,476	Mountainous
1982/83	BASP roads	2,865	21,748[4]	19,850	Hilly/Mountainous
1980/82	Seaka-Phamong	2,680	28,800[4]	27,834	Hilly/Mountainous
1982/85	Phamong-Nohana	3,567	52,916	44,979	Hilly/Mountainous
1982/83	LTC Access Roads	2,883	43,500[4]	37,845	Rolling/Hilly

1. Wage rate M 1.6
2. Wage rate M 2.4
3. Mainly regravelling works only
4. Wage rate M 3.4

At the micro-level, the general level of productivity appears to be reasonable, as exemplified in Table 3.

TABLE 3: DETAILED COMPARISON OF PRODUCTIVITY

Tasks (excavation)	Lesotho	Malawi	Kenya	Honduras	India
In firm soil (m^3/m.d)	2.75	2.28	3.0	2.76	3.5
In rocky material (m^3/m.d)	0.83	-	1.8	0.84	1.2

Comparison with equipment-intensive methods

We have mentioned that one of the basic criteria by which the LCU should be judged is whether the investment would have been better made in equipment-intensive methods rather than labour-based ones. Simple as this comparison may sound, it is extremely difficult to effect, because:

* productivity of labour and equipment varies enormously under different conditions and in different constellations;
* it is often difficult to compare two projects due to differences in terrain, soil type, climatic conditions, location, accessibility;
* labour-based techniques are implemented in an intrinsically different environment, so that it may be misleading to apply theoretical equipment-intensive figures to a labour-based project;
* productivities obtained on a labour-intensive pilot project with a high level of technical assistance may not be comparable with productivities obtained with a conventional equipment project.

On the other hand, one is not looking for great accuracy in a comparison of this kind. In a country with limited foreign exchange and high unemployment, if labour-based techniques can produce the same product for a cost which has the same order of magnitude as equipment, then the choice is self-evident.

During the development stage of the LCU, several comparisons have been made. Most of these have been indicative rather than conclusive. For example:

* **LTC access track** - a contractor's bid for this project was M 120,000/Km, whereas the project was actually constructed by the LCU at a cost of M 43,000/Km.
* **Regravelling** - In 1980, contractors estimates for regravelling work was M 7,000/Km. The LCU were executing similar work for M 6,900/Km.

* An analysis made by the LCU consultants of nine projects completed prior to 1981 indicated that in only one case was the break-even wage rate for labour-based techniques less than the prevailing wage rates. This one case was on a mountainous road in difficult terrain. In other words, in all cases but one, the labour-intensive methods were found to be more economical than a capital-intensive technique.
* In 1980 Wykstra and Eckert carried out a case study on the construction of conservation works by both labour and equipment-intensive techniques. The study concluded that labour-intesive techniques were significantly cheaper and had a much higher cost/ benefit ratio.

More recently, the World Bank has attempted a more detailed analysis in connection with the 3rd Highway Project. Whilst the final results are still not available, the MOW's estimates of the cost of rehabilitating 1 Km of gravel road show that at 1984 prices, labour-based methods are 65 per cent of equipment intensive techniques. Allowing for the recent increase in wage rates, this still makes labour-intensive methods about 75 per cent of the cost of equipment.

All the evidence, therefore, appears to suggest that labour-based techniques as applied by the LCU are competitive with equipment at market prices. Naturally, if shadow-pricing were used, these methods would be even more competitive.

Table 4 provides a breakdown of the expenditure of the LCU excluding the cost of technical assistance. This shows that, on average, more than 40 per cent of the investment has been spent on wages. This figure dropped in 1984/85, mainly due to the difficulties encountered in constructing the Phamong-Nohana road, which is in mountainous terrain and includes a major bridge structure. This project accounted for nearly 30 per cent of the turnover in 1984/85.

TABLE 4: PERCENTAGE DISTRIBUTION OF DIRECT COSTS OF LCU 1980/81-1983/84

	1980/81	1981/82	1983/84	1982/83	1984/85[1]	RARP Kenya
Wages	41	49	44	42	33	47
Salaries	10	7	12	11	8	22
Materials	13	7	7	11	13	7
Transport	29	19	25	14	39	18
POL/Running costs		10	5	16		4
Misc.	7	8	3	6	5	2

[1]: 10 month period April 1984 - January 1985. The high cost of transport reflect high investments in equipment for projects started during this period

The final column provides the comparable breakdown for the successful Rural Access Roads Programme in Kenya. At a wage rate of US$ 1.2 per day, the RARP constructs 4 m gravel roads at a cost of $ 6,500. On a pro-rata basis, therefore, the LCU ought to be able to construct similar roads for about $ 12,000. It should be noted, that RARP roads are rarely built in such difficult terrain as in Lesotho.

In terms of comparability, therefore, not only do the labour-intensive methods seem to be competitive, but they also ensure that a major share of the investment remains in the country.

Construction techniques

In general, the standard of construction was found to be good. Certainly the labour-based methods seem to be capable of constructing Gravel 3 roads to the required standard, both in simple lowland and in more demanding mountainous terrain.

Attention to certain minor points would lead to further improvements in the quality of the roads constructed.

At present, the construction process does not include the production of a level platform prior to the digging of ditches and the forming of the camber. We recommend the introduction of this process, which would be beneficial in several ways. In the first place, it provides a horizontal platform from which to build up the camber. Secondly, it would make it possible to develop a smoother vertical alignment. Thirdly, it would make the setting out of activities simpler.

Another suggestion is that 'T-boards' are introduced for sighting the vertical alignment. In the case of construction in side cuts, this operation would normally follow from the slotting operation, so that the slots would serve not only as indicators of the length and size of the task, but also as the level of the platform referred to above.

Berea District Road. The quality and methods of construction are generally good, although some improvements would be possible.

More use could be made of string-lines, particularly in relation to the formation of the camber. There is a tendency to shovel the drainage material to the edge of the road, rather than throwing it in the middle. It can then be spread away from the centre of the road, providing a better camber. This can be done by placing string lines on either side of the centre line and instructing the workers to throw the excavated material between the two lines. The reduction in output of the drainage activity would be small, and would be more than justified by the production of a better camber.

One could also question the use of tippers, which has become common within the LCU. When the haulage distance is less than 5 km, it has been shown elsewhere that tractors and trailers are more economical.

In mountainous terrain with steep cross-cuts, the standards prescribe one internal drain with the formation sloped towards it, which is sensible. Given the high rate of soil erosion in Lesotho, however, it is likely that the internal drains will erode very quickly, despite scour checks. Whilst there is no quick nor cheap solution to this problem, we suggest that consideration is given to a larger number of cross-culverts, the provision of cut-off drains and possibly to the lining of drains in particularly steep sections.

Finally, it would be worth thoroughly investigating the potential for the local production of good quality tools and simple equipment, like wheelbarrows, for labour-based work as some of the tools imported from South Africa are not of a particularly high quality.

Similarly, some investigation of the possibility of more extensive use of donkey carts would be most appropriate. This has been experimented with and used in one project where access was particularly difficult. Given the terrain in Lesotho, this is a common problem.

Criticism of the LCU

During the period 1982-84 a number of critical comments have been levelled at the LCU. They have related to:

* Lack of institutional permanence;
* Inability to localize top administrative posts;
* Cost;
* Quality.

The first two points will be discussed in the subsequent chapters. Criticism of costs and quality have been almost wholly reserved to the World Bank. There does not seem to be full consensus even amongst World Bank staff on this subject.

Whereas in 1980 execution of labour-intensive operations was "highly successful", in 1982 the work of the LCU was of poor quality, cost-effectiveness was questionable, supervision inadequate and staff turnover frequent. In 1983 problems related to the organizational structure and lack of permanence were noted.

In the appraisal of the application for the 4th Highway loan, it was stated that the two brigades supervised by the LCU were "facing serious staffing problems (technical and managerial) resulting in lower output (in terms of quantity and quality) and higher costs than originally anticipated". The World Bank has agreed to finance only one labour-intensive brigade under the 4th Highway Project.

Elsewhere, the World Bank has noted that it is difficult to establish whether the divergence of opinion regarding the LCU was due to differences in reporting standards, the focus of the evaluations, or in actual changes in LCU's performance. It is certainly unfortunate that no facts nor figures have been presented to substantiate the severe criticism which has been made.

It is clear that whatever technologies are employed, problems and errors will arise. What one must consider, however, is whether labour-based techniques have been as effective in the tasks to which they have been applied as the alternative, equipment-based techniques would have been in the prevailing circumstances.

One ought not to forget that the positive results which are usually obtained from socioeconomic analyses of road building and rehabilitation projects, are based on an assumption of a certain minimum level of continual upkeep.

If this level is not maintained, vehicle costs rise considerably and the profitability of the project is undermined. Here may be the occasion to point out that there are possibilities of achieving an inexpensive and labour-intensive maintenance of the roads through the so-called lengthman system.

Irrespective of the technology which is used to construct a road, it will deteriorate rapidly if it is not maintained. The general lack of maintenance is one serious problem, which has been neglected by donors and the Government alike.

The conclusions regarding both quality and quantity of output, which have been arrived at by this mission, deserve to be reiterated. The figures indicate that LCU's methods have been competitive. Moreover, the LCU has created an environment within which the techniques work effectively.

There seems to be no doubt whatsoever that labour-intensive methods can be effectively used to construct gravel roads where the expected flow of traffic is less than 50 vehicles per day.

5 ADMINISTRATION

The LCU has always had difficulty in reconciling its various roles. As it has not had a guaranteed flow of work, it has had to devote a great deal of effort to obtaining projects. On the other hand is was also supposed to set up efficient support systems for the implementation of projects. Given the overriding objective of developing the size of its operations, the level of the administrative framework was likely to suffer.

Moreover, we have mentioned that the LCU has been viewed as a somewhat wayward member of the family of the Ministry of Works, MOW, resulting in a state of ambiguity, where it was unclear whether it was part of the government or not. This is particularly evident in relation to administrative matters.

Trying to act efficiently within the procedures of Government has proved difficult for the usual, well-known reasons, namely, the lack of flexibility in setting salaries, retaining profits, having one's own accounting, etc. Given its nature, the LCU management has stated that it would be better to develop its own systems.

Prior to 1984 and the resuscitation of the senior administrative post in the LCU, the administration of the unit was rather weak, but probably no more so than in the rest of the MOW nor in the Government in general.

Various efforts have been made to improve the administration unit and many of these are eminently sensible, such as those relating to filing, reporting and financial control. Nevertheless, there is a more general proposal which relates to the LCU becoming more independent and autonomous.

It is suggested, for instance, that the LCU should handle all its own financial matters, which would no longer have to pass through the MOW's treasurer. Likewise, further staff should be assigned to the accounting function of the LCU.

If it is decided that the LCU should become an autonomous parastatal organization actively seeking contracts for labour-intensive work, then this approach makes sense. If, on the other hand, the long-term objective is to integrate the road construction capability of the LCU into the Roads Department, then this move towards greater autonomy should not be made. Rather, one should look into technical as well as administrative means whereby the gradual integration of the LCU into the Roads Department can be effected.

The organizational position of the LCU within the Government administration as well as the degree of autonomy which is desirable is further discussed in Chapter 8.

Planning, reporting and control

This aspect should be seen in relation to the general level of reporting and control within the Government. On this basis, the level of planning and reporting is satisfactory and provides a clear indication of the general level of productivity, output and costs.

In relation to the need to make accurate comparisons between activities and projects and the trends over time, the level of reporting is, however, only now becoming satisfactory. Whilst a large amount of data has been collected, it has not always been compatible. It is, for instance, extremely difficult to ascertain equipment costs. This is partly due to the fact that equipment is hired, while that, which is the property of the LCU, is not charged to the project in the normal way. Costing procedures of the type described in the World Bank's publication, "Labour-based Contruction Programs", would be useful here.

6 TECHNICAL ASSISTANCE AND TRAINING

Management level

An area which is of strategic importance for the future of LCU, concerns localization of senior posts, i.e. to successively replace the expatriate consultants with qualified local personnel. Instead of being reduced, the costs for foreign technical assistance have actually risen in the past two years.

This is particularly worrying for SIDA, which has been responsible for financing the consultant posts since 1980. It is remarkable that, after eight years, the management of the LCU still consists of six British consultants and that the organizational plan of the Ministry of Works indicates that the consultancy firm of Scott, Wilson, Kirkpatrick & Partners (SWKP) is responsible for the LCU. This responsibility has not been completely formalized in contracts between the Ministry and SWKP.

Several causes for these conditions have been mentioned:

* The status of the LCU, which is still regarded as being temporary. This impression has been reinforced by the fact that, for all this time, the LCU has been housed in temporary quarters, caravans converted to offices. Not before 1986 will the LCU acquire permanent offices.
* The small number of established posts, i.e.permanent jobs, has contributed to the problems involved in recruiting local staff. It means that potential recruits do not regard the LCU as a good place for furthering their careers.
* Pay levels, a generalized problem for all the public authorities in Lesotho, since the private sector pays considerably more and South African companies offer engineers and technicians many tempting job opportunities.

* It also appears that other departments within the Ministry of Works and the Road Branch have been more attractive to Basothos who have recently completed engineering examinations. This is probably also linked to the bias in the training of engineers in favour of equipment-intensive methods.

Even taken together these factors do not explain why there has been no success in persuading any Basothos to take one of the management jobs. It would appear that there has not been enough interest in identifying suitable local personnel and planning for a transfer of responsibility. Only in March 1985 was a proposal put forward for a localisation plan. This indicates a continued reliance on consultants at managerial level for several years.

One promising sign, however, is that a former LCU employee, a Basotho engineer who recently returned from studying abroad, has now joined the management of LCU. It has been proposed that this person take over management responsibility for the LCU in a few years time. Also a few other LCU employees have been identified as suitable candidates for taking over management positions in the future.

The quality of the work carried out by the consultancy firm is fully satisfactory. Its staff appear to be competent and highly motivated. Their fees are normal for international consultants. It should be noted, however, that there have been no competitive tenders submitted in connection with any of the extensions of the consultant firm's contract, which has now been in operation for eight years.

The February 1985 policy document of the Ministry of Works proposes that the personnel of the Consultant firm should be replaced by bilaterally recruited staff. This might be less expensive, but probably means poorer continuity and does not solve the long-term problem of the transfer of management responsibilities to local staff.

When estimating the continued need for foreign personnel in the LCU, attention must be paid to the organizational model chosen. In addition, it must be taken into account that some of the present functions of the LCU, particularly marketing of labour-intensive methods and contingency planning, is proposed to be transferred to the CPDO. Foreign staff within a labour-intensive unit in the CPDO would hopefully be able to support local personnel when they take over the management of the LCU.

The evaluation mission recommends that SIDA, as a precondition for further support to the LCU, recommends the adoption of a plan regarding the localization of management and that the Ministry of Works allocate suitable personnel.

Supervisory level

As is commensurate with an efficient labour-based programme, the LCU has an extensive supervisory organization. Labour-based techniques demand a higher level of supervision than equipment and it is, therefore, of prime importance to have an effective training programme. Each project requires a senior technical officer. Each group of 100 labourers should have a hierarchy of 1 technical officer, 2 senior technical assistants and 4 technical assistants. The expansion of the work programme is, thus, critically dependent on the number of trained supervisory staff available.

Unfortunately, this process has gone on very slowly and is one of the few areas where criticism can be levelled against the LCU for not having achieved high standards.

Lack of Basotho manpower, particularly of supervisory staff and engineers, poses a significant obstacle to an expansion of the LCU's operations. Less than half the requisite posts have been filled and there is no quick nor easy solution in sight.

To attract supervisory staff, the LCU has to compete with other government and private employers, some of which offer jobs which are considerably more exciting than the building of low cost roads in the countryside, while others can offer higher pay than the LCU.

Even though the training of personnel from other government departments in labour-intensive methods of construction is one of the tasks handed to the LCU, little is taking place, and what there is, has been arbitrary. It has been basically on-the-job, but there have been some short formal courses. A training manual has been developed, which is useful and practical. It could possibly also be helpful in other countries with similar labour-based projects. Nevertheless, it would not be unreasonable to criticize the LCU for not having thought more seriously about formalized training until recently.

Supervisory training needs

For the present labour force of 1,000, the supervisory personnel required is as follows:

TABLE 5: SUPERVISORY STAFF REQUIREMENTS

For the present labour force of 1,000, the supervisory personnel required are as follows

	Requirement	Established
Engineers	4	2
Asst engineers	2	3
Principal technical officers	5	2
Senior technical officers	10	5
Technical officers	10	8
Technical assistants I and II	60	26

Today there is thus an acute need to establish more posts primarily technical assistants at levels I and II.

Any increase in the labour force would require a pro-rata increase in supervisory staff. It is also worth noting that the number of posts established is not even sufficient for a labour force of 1,000. This means that most Technical Assistants and some Senior Technical Officers are paid on a daily wage basis, which does not provide any positive career incentives.

Existing problems with training

The training advisor, who took up his post in September 1984, has effectively pin-pointed the problem in his preliminary report. "The existing training", he says, "has generally been successful im importing practical knowedge, but relatively unsuccessful in teaching basic theory, largely because time for formal courses has been minimized by pressures to complete projects."

It would, however, be foolish to consider training for the LCU in isolation. In the first place, the overall training resources at the disposal of the MOW are meagre. The post of training officer in the Roads Department is presently filled by an expatriate, but it is not clear that he will be replaced at the end of his contract. Thus any attempt to support LCU training must be seen in relation to this overall constraint on resources.

More importantly, not only the LCU, but also the MOW requires training programmes in labour-based methods. The three other ministries will require similar programmes. The proposal made by the training advisor that a Labour-Intensive Training Unit, LITU, be developed, which would train trainers rather than trainees, is thus a sound one.

The overall concept proposed and the framework described for the LITU provides a solid basis for the development of training in labour-based techniques.

The mission would draw attention to the on-going training programmes on labour-based methods being conducted in Botswana, Malawi and Kenya. The mission suggests that the LITU be regarded as a central training unit and not as part of the LCU.

7 PROSPECTS FOR EMPLOYMENT GENERATION THROUGH LABOUR-INTENSIVE METHODS

Most analyses of Lesotho's economy seem to agree that there is, or should be, considerable scope for further labour-intensive construction work in Lesotho. The basis for advocating labour-intensive schemes is indeed solid for a poor, labour-surplus economy like Lesotho. As was already noted above, the domestic multiplier effect of money spent on unskilled labour is potentially much larger than that of money spent on capital equipment. The latter being imported in nine out of ten cases, the whole multiplier or linkage effect takes place abroad.

With the factor prices prevailing in Lesotho today, the introduction of labour-intensive construction techniques is very viable proposition in a wide variety of different public works schemes. Also, there is no indication in the short and medium term that the cost relationship between capital and labour will change, either through economic policy or through other forces.

The movement of some factor prices since 1977 are shown in Figure 4. The curves show that while cement prices increase continously, the labour wage rate and tipper hire rates increase by discontinuous steps. The resulting increase over the eight-year period is more or less the same for the three factor prices.

We conclude, therefore, that given the existence of well-planned and well-managed projects, it is at least for the present quite reasonable for Sweden to continue its support for labour-intensive public works in Lesotho.

It may be of interest to point out that shadow prices are not used by the Ministry of Planning in its project preparation, due to budgetary constraints on the Government of Lesotho. So a labour-intensive proposal, which does not pass on the basis of the financial or market prices, will not be accepted, even if it turns out that the project would have been profitable in terms of shadow pricing.

FIGURE 4 - MOVEMENT OF SOME FACTOR PRICES 1977-1985

Since the shadow wage of labour is lower than the actual wage paid (because of the wide-spread unemployment) and since the shadow price of capital is roughly equal to the market price of capital (due to the free movement of capital between the BLS countries and South Africa), then the application of shadow factor prices will show labour-intensive projects to be more profitable than capital-intensive ones, all else being equal.

Calculations of shadow prices of labour-intensive techniques that were made at the beginning of this decade still hold today. In fact, the relation in favour of using labour-intensive methods has been reinforced, because the price-ratio of the shadow cost of wages, relative to the shadow cost of capital, has gone down still further. It has become even more viable from a socio-economic point of view to engage in labour-intensive construction work.

As many donors are reluctant to finance costs in local currency, the more labour-intensive a project is, the more demands are posed on the Government's fiscal budget. Since the Government of Lesotho suffers from budgetary constraints, it is prevented from introducing as many labour-intensive projects as it might otherwise have done.

Another aspect is the question of the economic viability of projects. Regardless of whether capital-intensive or labour-intensive techniques are used, a full cost/benefit analysis is needed. Is it worthwhile undertaking the massive construction works proposed for soil conservation schemes in the rural areas, for country and mountain roads, for airstrips and fish ponds? Are they worthwhile investments in themselves or from the point of view of the whole economy?

As far as we have seen, most calculations that have been made regarding labour-intensive techniques all assume that the investment will somehow be made, so the task then has been to figure out which would be cheaper, labour-intensive or capital-intensive methods.

Calculating whether the investment is worthwhile making, compared to alternative projects, remains to be done. In other words, is the social rate of return on the building of mountain roads or of soil conservation schemes higher than, or at least as high as, an investment in industry or in a large-scale infrastructural construction such as a bridge, a silo or an energy plant.

These questions need to be answered before one can judge the realism of claims which have been made in some documents that "50-100,000 jobs can easily be created by using labour-intensive techniques in the rural areas."

Sectors where employment can be generated

There seem to be conflicting views on which areas offer the greatest scope for the creation of labour-intensive jobs. On the one hand, it has been ascertained that particularly mountain roads are most important in creating labour-intensive employment opportunities. On the other hand, several other sources claim that the scope for expanded labour-intensive road construction is rather limited, mainly due to the fact that the building of mountain roads, due to the demanding terrain, usually requires rather capital-intensive techniques The mission finds that LCU has proved that labour-based techniques can be effectively applied on gravel roads construction in Lesotho regardless of terrain.

Other sources maintain that by far the best opportunity of creating labour-intensive employment is in the rural development sector, in soil conservation, irrigation and the building of dams and terraces. A comparison between the competitiveness of labour-intensive and capital-intensive techniques in soil conservation works has been calculated by Wykstra and Ekhardt (LASA Report No. 6).

The upcoming five year plan, which is now in draft form, has the following to say regarding the sectoral priorities of projects for employment creation in Lesotho:

> "Large scale labour-intensive programmes in agriculture and rural development, particularly in soil and water conservation, afforestation, small irrigation, feeder and village roads, etc, prepared by relevant ministries in consultation with the labour-intensive construction unit aiming at inter alia employment creation on a large scale, will be given priority, provided donor financing is secured."

The general picture of the long-term development of Lesotho as it has been conveyed in economic reports from the World Bank, the International Monetary Fund, the International Labour Office, the UN Development Programme and others is that, the bulk of the country's employment opportunities will have to be created in the rural sector.

Two ways to attain productive employment.

There are basically two different ways to attain the objective to create as much productive employment as possible, namely

a) The substitution of labour-based methods for equipment

b) The improvement of on-going labour-based programmes to make them more productive

As far as the first type of work is concerned the most important sectors are

(i) The road programme of the Ministry of Works
(ii) The soil conservation of the Ministry of Agriculture
(iii) The urban projects of the Ministry of Interior

The potential for increasing employment by substition is illustrated in the below table 6:

TABLE 6: SHARE OF WAGE COST IN TOTAL COST OF CONSTRUCTION FOR DIFFERENT TYPES OF PROJECTS

Machine-intensive infrastructure projects	Labour-intensive projects		
	Gravel roads	Earth roads	Soil Conservation
10-15%	35-45%	50-60%	70-80%

The figures support previous statements about soil conservation offering the most interesting possibilities for creation of employment by labour-intensive methods.

However, it should be born in mind that due to limitations of funds, the present soil conservation activity within the Ministry of Agriculture is quite low. If the work that is presently being carried out by

machines was to be carried out by manual labour, the increase of employment would only be a couple of hundred men.

The same applies to existing urban works within the Ministry of Interior.

The second type of work is principally encompassed by the Food-for-Work programmes. Presently some 12,800 workers are working on roads, soil conversation and woodlots projects through the Ministries of Agriculture and of Co-operative and Rural Development. Most of these labourers are working very inefficiently and there is enormous scope for the application of the efficient techniques that the LCU has developed.[1])

One further point regarding future work relates to the Highland Water Scheme. It is clear that the major investments in this scheme will be for high technology items. The opportunity should not be lost, however, to maximise the use of local resources in its implementation. The forthcoming study of the domestic construction industry financed out of the 4th Highway Loan should clearly analyse this aspect of the scheme.[2]) and LCU's potentional role in this project should thereby be carefully analyzed.

Employment

The employment situation in Lesotho today is unstable. Out of a population of around 1,5 million, and an estimated labour force of approximately 600,000, a conservative estimate is that over 40,000 people are unemployed or underemployed. Add to this an estimated net annual addition of 17,000 and a targeted annual return of 2,000 migrant workers from South Africa and we have approximately 230,000 people who will be needing jobs over the next ten years.

This means that an average of 23,000 jobs will have to be created annually. The Government of Lesotho is

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1) See for example ILO. Rural Roads Maintenance and Improvement in Lesotho: A Programme for Development. Dec 1984.

2) See LCU Job Report No. 30. A Role for the LCU in the Highland Water Scheme.

considered to be capable of creating not more than 10,000 jobs per year, which leaves a shortfall of about 13,000 jobs annually. This figure should then be compared to 100,000, which is the approximate total number of people who are gainfully employed in Lesotho today.

The situation is made to appear more alarming in some documents and publications on Lesotho, whose authors anticipate a possible mass exodus of migrant workers pushed out of the mines in South Africa. They refer to South Africa's tendency in recent years to grant jobs to workers from her own homelands, or bantustans, rather than to migrants from independent neighbouring countries.

Some writers fear that a future economic depression or a situation of political uncertainty inside South Africa may produce a wholesale expulsion of the workers from Lesotho, giving rise to an emergency situation there. The impression of the ILO is that the likelihood of a mass expulsion of migrant workers is remote.

Moreover, South Africa is playing out Lesotho against Angola and Mozambique, as well as against the other Frontline States when it comes to accepting migrant workers.

Today South Africa is in the process of completing labour agreements with Mozambique, which, during colonial times, used to send many labourers to the mines. It is feasible that from now on Mozambican miners may replace workers from Lesotho to an increasing extent, just as the number recruited from Lesotho increased dramatically at the expense of Mozambique after its independence in 1975.

But, as was pointed out above, the risk of a dramatic change occurring suddenly in the number of Lesothian nationals working in South Africa is considered to be small.

One significant factor is that the mining companies in South Africa prefer recruiting workers from Lesotho because the Basothos are regarded as being very reliable and experienced workers. It is assumed that the South African mining companies and the Chamber of Mines would, in their own economic interests, oppose any political

decision to drastically cut the number of Basotho workers and to replace them with Mozambicans, Angolans or even homeland workers.

To fully understand the labour market in Lesotho, two additional aspects need to be taken into account. Firstly, whatever initiatives the Government and donors may come up with concerning the creation of employment, Lesotho will not, in the foreseeable future, be able to employ all of its labour force. Kizilyalli maintains that

> "Whatever the growth rate and the technology adopted (labour-intensive) Lesotho will not be able to employ all its labour force in the year 2000, domestically. Thus full employment is not an attainable (feasible) target."

> "Choice of labour-intensive technology in the investment projects and labour-intensive public works programmes does not solve the problem, but might only alleviate it. Drastic and effective measures in the following fields might solve the problem: (i) population control, (ii) intensive agriculture, (iii) labour-intensive export industries, (iv) upgrading the skills of labour by technical training."

Secondly, much of Lesotho's economic dependence on South Africa is natural, in the sense that a very small country cannot afford to be self-sufficient in every aspect of her economic life. The small size of the economically active population within the country itself will, for years to come, impose serious limitations on large scale modern industrial production. In addition, the grave shortage of raw materials, skilled manpower and managers will constitute important constraints to economic self-sufficiency.

8 OPTIONS FOR DEVELOPMENT OF LABOUR-BASED TECHNIQUES

One objective of the SIDA mission was to establish how SIDA financing could most effectively support the use of effective labour-based techniques in Lesotho. Until now it has been assumed that this objective could be achieved through the LCU. Whilst the latter has indeed illustrated that it is possible to effectively utilize labour-based methods, in particular for road works, it has as was noted above, failed to create employment in any increasing scale and it has also been unable to transfer its knowledge and experience into other parts of government, or even within the Ministry of Works, or to the private sector.

Whilst the mission is convinced that there is major scope for the development of labour-based work, such a development would be dependent on overcoming the basic problems that have beset the LCU and its attempts to promote labour-based methods.

In the first place, it is worth identifying the major constraints on the LCU identified by the consultants and by the World Bank evaluation of 1982. These are:

a) The LCU has no permanent status within government thus affecting the way it is viewed by both government and prospective employees.

b) The Unit has no assured funding of projects.

c) There is a shortage of middle level, qualified, technical supervisory staff. Which, as were pointed out above, in its turn depends on the lack of freedom for LCU to set competitive wages and salaries.

d) There is little real promotion of the concept of labour-based methods within government.

e) the LCU has a multiplicity of objectives some of which are conflicting. Thus at one and the same time it is an implementing agency, a policy development group and an advisory organization.

Any proposal regarding the organizational position of LCU must therefore attempt to solve these problems.

There appear to be three basic options to consider. These are:

1. Develop upon the existing organizational position of the LCU.

2. Attempt to integrate the labour-based concept into government - i.e. diversify by spreading the LCU activities to other branches of government.

3. Set up a para-statal labour-based contracting group.

Option 1 is favoured by the MOW, option 2 has been touched on at various times by various evaluating teams and option 3 has been proposed by the World Bank amongst others.

Briefly it is worth spelling out the advantages and disadvantages of the three options defined above.

<u>Option 1: Develop upon the existing position of the LCU</u>

The details of this option are set out in the MOW's draft policy paper. Basically this suggests:

a) that LCU should expand its activities over the next ten years to cover a labour force of 5,000 at a recurrent expenditure of M 470,000 annually;

b) that GOL creates the position of Labour Employment Adviser in the CPDO (or the MOW) and at the same time appoints an inter-ministerial technical/ planning Coordinating Committee;

c) that GOL obliges all ministries involved in construction works to identify at least one potential labour-based construction trainer;

d) that GOL permits LCU to negotiate for sub-contracts and to earn revenue on a labour-intensive basis;

Thus LCU would continue to act as presently but would be provided with the opportunity to become more self-sufficient and commercially oriented.

The arguments in favour of this option are as follows:

- The LCU would continue to execute labour-based work in an effective and efficient manner.
- The Unit would be relatively free from interference.
- The Unit could also act as a para-statal contractor.
- The Unit could create its own administrative and managerial systems and thus circumvent onerous and time-consuming government procedures.
- Labour-intensive methods would be used efficiently and could set an example to both the public and private sectors.

The arguments against Option 1 are:

- It would have little spare capacity to develop institutional capacity for labour-based methods in other ministries. Indeed its own objectives would be at odds with this for it would be asking ministries to give it the labour-based work that they had available.
- It would probably be almost totally dependent on donor funding.

- As a separate unit tendering for work it would neither be within government nor outside it.

- It would just like today provide limited career development opportunities for its staff.

- If LCU had even only 50% of work in roads, it would be ambiguous to have 3 separate units in government dealing with road construction.

- The Unit would be almost totally concerned with implementation and would have little time for policy or advisory matters. (This would not be a serious problem if there was a central co-ordinating group who was able to carry out these functions.)

Optior 2: Integration into Government

The idea here is that each ministry dealing with infrastructure works (in practice only 4) would develop its own capacity to be able to effectively utilize labour-based methods.

From the point of view of government policy of attempting to provide employment to the majority of Lesotho, this option appears to be the most promising. Nevertheless, it also presents serious problems.

In favour of this option are the following:

- Each Ministry dealing with infrastructure would have the capacity to utilize labour-based methods in their own regular routine construction activities.

- There would be a possibility to have a planned programme of development of employment-creating, infrastructure works.

- Labour-based techniques would be seen as an alternative means of career development.

- The use of the techniques would be seen to be a Government, rather than purely a donor, concern.

- Ministries presently inefficiently using labour-based techniques would be supported to make the methods productive.

Against this option are:

- The efficiency of the techniques would be diminished by dissipating resources within several ministries.

- Each individual ministry might resist the introduction of the techniques.

- Donor financing to support such an option would be required.

- A strong, powerful centralized coordinating body with authority to deal with each Ministry involved would be absolutely necessary.

Option 3: A para-statal labour-based group

According to the information available to the mission this is a perfectly feasible possibility in terms of present government rules and regulations. In many ways this option seems to present an effective solution because:

- It could work outside government regulations.

- It could provide a nucleus for the development of labour-based techniques in the private sector.

- It would be able to develop its own systems and procecures.

- It could continue to use efficient labour-based techniques.

- External funding could easily be channelled to it.

On the other hand, there are serious disadvantages associated with this option.

- It is a means to an end, for it does not provide a planned development of labour-based techniques in Lesotho.
- Labour-based work would be concentrated in one, marketed-oriented, organization.
- It would require a basis of external funding for turnover and technical assistance.
- The possibility may be lost of developing training programmes and policies related to labour-based techniques within government.
- The focus on labour-based techniques would to a very large extent depend on the character and calibre of the managing director.

Conclusions

Each of the three options described above has its advantages as well as disadvantages. The one which in the opinion of the authors of this report seems to be the most promising is the second one.*)

This option is dependent, however, upon the following actions:

a) A unit being set up in CPDO with sufficient authority to ensure that a planned programme is established.

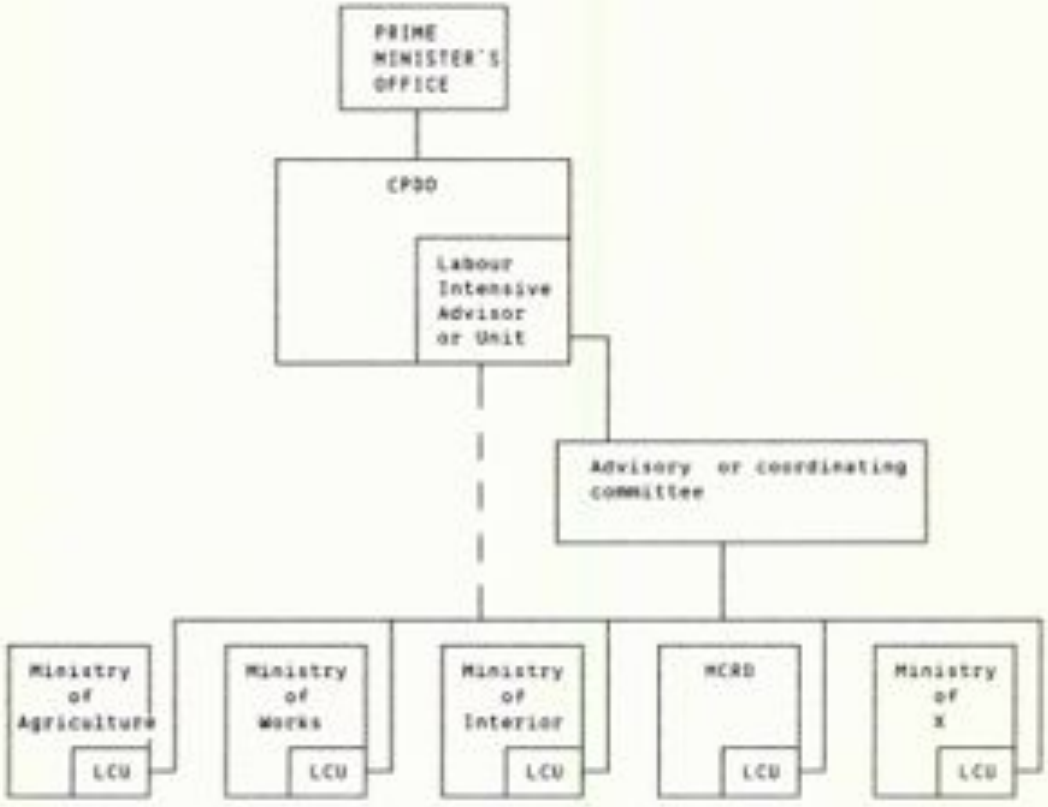
b) A planned programme of work being available in (i) Roads Department of MOW, (ii) Civil Works Section of MCRD, (iii) Soil Conservation Division of MOA, and (iv) the Ministry of the Interior.

*) However, it should be mentioned that the member of the mission who was appointed by the Government of Lesotho, i.e. Mr A T Lehobo, strongly argues in favour of the first option. In a separate comment found as Appendix 7 to this report Mr Lehobo emphasizes the risks that might be connected to the second option.

c) The Co-ordinating Committee, comprising of the four ministries mentioned in (a), being reconstituted with the CPDO Unit being the secretariat.

In terms of an organigram, option 1 could be described in the following way:

FIGURE 5: THE INTEGRATION OF LABOUR-BASED TECHNIQUES INTO THE GOVERNMENT STRUCTURE



As far as the mission is concerned the setting-up of the central unit in CPDO would be absolutely imperative whatever options chosen. Equally the mission feels that the Coordinating Committee as an active, advisory body would be indispensable.

A terms of reference for the unit within CPDO is attached. It should be noted that we suggest that the Unit comprises of three persons viz:

1. A Labour Construction Adviser
2. A Programming and Planning Officer
3. A Labour-based Training Officer

This implies that Post 1 be filled as soon as possible as suggested by GOL. That the posts in the LCU of (2) and (3) be transferred to the CPDO Unit as soon as the Adviser feels that it is appropriate.

We recognize that Option 2 will be the most difficult to achieve. Nevertheless, because it is likely to have the greatest long-term impact we feel that it is option to go for. We do not, however, expect the change to be made overnight. It would take place in a series of stages of at least a 2-3 year period.

What is proposed is that the main part of the existing LCU be gradually taken over by the Roads Department which will set up a special division for labour-based road improvement and maintenance. At the same time each of the three other ministries (MCRD, MOA and MOI) presently involved in labour-based work would develop their own capacity to execute labour-based projects, organized perhaps along the same lines as was LCU.

The present work programme of the LCU is mainly in road improvement. Over the next 2-3 years the Central Unit would give particular emphasis to supporting those activities of the LCU which are not roads. Thus support would be provided to the Ministry of Agriculture and MCRD in relation to their soil conservation activities and to the Ministry of Interior in relation to urban projects.

During this period LCU would not actively seek further non-road projects. The Central Unit would also take special care to support the feeder road programme of the MCRD both from separate donor or GOL funding and from services provided by the LCU.

It can be argued that the splitting up of the LCU and the diversification of activities will reduce efficiency and limit employment-creating possibilities. As far as efficiency is concerned, we see no reason why this should be so in relation to road improvement. There may be some reduction in efficiency in relation to soil conservation but the amount of work carried out by LCU in this area is minimal. As for employment creation, we are of the opinion that the previous performance of LCU as far as employment creation is concerned is rather dismal and fairly radical action is necessary. When there is already today the potential for improving the efficiency of 12,800 workers in the now on-going Food-for-Work projects, the concept of expanding the LCU to 5,000 over 10 years becomes less attractive.

In the development of labour-based techniques in Lesotho we see the role of a strong central advisory and coordinating unit as crucial. It would have the job of promoting, planning, monitoring and evaluating all labour-based projects. It would therefore take over all of the functions, except implementation presently being exercised by the LCU. As all of these functions are planning and advisory it is important that the unit has authority. This can be achieved in various ways but we suggest the following measures.

a) All proposed infrastructure programmes must be cleared by (or advice must be sought at) the unit to ensure that the maximum use has been made of labour-based techniques.

b) As a first priority the unit should prepare a policy document on the use of labour-based techniques. This would develop upon the theme presently set out for the 4th development plan.

c) The unit would act as the secretariat for the reconstituted Coordinating Committee on Labour-Based Methods[1]

d) The unit would be provided with consultancy funds to assist ministries in the development of labour-based techniques.

As far as the long term is concerned it is suggested that each of the ministries concerned with infrastructure work should have the capacity to implement labour-based programmes.

It is appreciated that this will take time and resources. Equally the effort required will vary from one ministry to another. For instance, given that the LCU is presently within the MOW and the great majority of its work is in roads, integration into the roads department should be relatively easy. On the other hand, the Ministry of Agriculture has presently very little capacity and this will require a great deal of effort to develop upon the pilot projects presently being implemented.

The main requirement will be for trained middle-management personnel. For this reason the sooner the labour-intensive training unit is set up and starts to train trainers from each ministry, the better.

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1) Thus would comprise of the Permanent Secretaries of the Ministries of Agriculture, Works, Interior and Co-operatives and Rural Development

LABOUR CONSTRUCTION ADVISORY UNIT - TERMS OF REFERENCE

Objective

The unit would be responsible for the preparation and co-ordination af the Government of Lesotho's policy with respect to the application of labour-based methods in all section of the economy.

Organisation

The unit would report directly to the Permanent Secretary of the Ministry Planning, Employment and Economic Development. It would act as the secretariat to the Advisory Committe on Labour-Based methods. The latter would consist of the permanent secretaries of those Ministries involved in infrastructure projects.

It is envisaged that the unit would consist of at least two persons; the Labour Construction Adviser already requested by the Government of Lesotho and a Planning Engineer who would assist the adviser. (The unit might also include the labour-intensive training unit).

The unit would have available to it some consultancy funds which it could use at its discretion to encourage the use of labour-based techniques.

Responsibilities

a) To study all Government funded programmes of infrastructure to assess whether sufficient attention has been paid to the possibility of using labour-based methods. It would be made obligatory for all infrastructure programmes to have been submitted to the unit for comment in this regard.

b) To prepare, in collaboration with the Ministries concerned, plans for the development of a labour-based capacity for the construction of infrastructure works.

c) To identify, with the Ministries concerned, feasible labour-based projects.

d) To seek donor funding for such projects.

e) To collaborate with the Ministries in utilizing consultancy funds for the development, implementation and monitory of labour-based methods.

f) To prepare detailed background documentation for the meeting of the Advisory Committee.

g) To stimulate the use of labour-based techniques in the private sector.

APPENDIX 2


BUTHA BUTHE
MOTSE
TEYATE YANENG
MASERU
MOKHOTLONG
THABA TSEKA
MAFETENG
MOHALE'S HOEK
QACHA'S NEK
QUTHING
N
Key:
Reconstructed roads
Regravelled roads
District Boundaries
District Headquarters
Conservation Works
Infrastructure & Road Upgrading
Airstrips rehabilitated
0 10 20 30 40 50 km

LCU WORK FROM 1977

PROJECT	FUNDS	DIRECT COSTS (M)	CONSTRUCTION PERIOD	REMARKS
A. COMPLETED PROJECTS				
Maseru-Moiteupeli Road	ODA	209,950	9/77-8/78	Road Construction
Maseru Mak-Ha Makintane Road	SIDA	312,748	9/78-8/79	Road Construction
Ratau Access Road	MOA	17,832	10/78-2/79	Road Construction
Lithabaneng-Ha Ramarome Road		97,303	10/78-2/79	Road Regravelling
Ratau Conservation Works	MOA	25,479	9/78-2/79	-
Third Highway Project	IDA	2,202,000	4/80-12/83	Road Regravelling/ Reticulation
Maseru Urban I project (phases I-III)	IDA/CIDA	1,191,695	4/80-12/83	Urban Streets and Water Reticulation
Lihlakaneneng Conservation Works	MOA	16,047	6/81-8/81	Terracing Works
LHC Infrastructure, Khubetsoana	LHC	38,189	9/81-3/82	Urban Streets and Water Reticulation
LHC Sundry works, Maseru	LHC	5,876	5/81-8/81	Urban Streets
Lancer's Gap Access Road	MOW	3,711	5/81-6/81	Road Construction
Maseru Township Roads	MOI	92,198	11/81-3/82	Urban Road Construction
BASF Roads, Berea District	KfW	482,079	2/82-10/83	Road Construction
LDDC Access Roads	TSRP	15,873	3/82-6/82	Road Construction and Surfacing
TSRP Access Road	TSRP	24,654	6/83-10/83	Road Construction
LTC Access Tracks	KfW	336,569	6/82-9/83	Road Construction
Min. Agric. Road, Maseru	MOA	13,800	2/83-5/83	Road Construction
PVPS Garage, Maseru	MOW	12,010	4/83-6/83	Parking Area Construction
Matimposo Works, Maseru	MOW	3,344	6/83-7/83	Stone Pitching
Seaka to Phamong Road	SIDA	1,492,748	5/80-9/82	Road Construction
Village Water Supply	TSRP	21,991	8/83-8/84	Parking Area Construction
LHDC Works, Maseru	EEC	51,461	9/82-7/84	Various
B. ON-GOING PROJECTS				
Maseru Urban I Project (phases IV, V)	IDA/CIDA	2,153*	5/84 to date	Urban Streets
Airstrip Rehabilitation/Maintenance	OCA	50,000 p.a.	-	21 Airstrips
Phamong-Mohaneng Road	SIDA	1,371,052**	5/80 to date	Road Construction
Maintenance of Public Assets	GOL	337,000 p.a.	-	-
A17 Sinxondo Road	SIDA	1,108,026*	7/84-6/86	Road Construction
Semonkong Vented Fords	KfW	283,363*	7/84-12/84	Vented Ford Construction
Semonkong Water Supply	KfW	42,115*	7/84-11/84	Water Supply Trench Excavation
Fourth Highway Project	IDA	2,392,480*	1/85-12/87	
Berea District Road	Berea Dist	770,000*	2/84-7/85	Road Construction
Leribe District Road	Leribe Dist	678,000*	2/84-3/85	Road Construction

APPENDIX 3

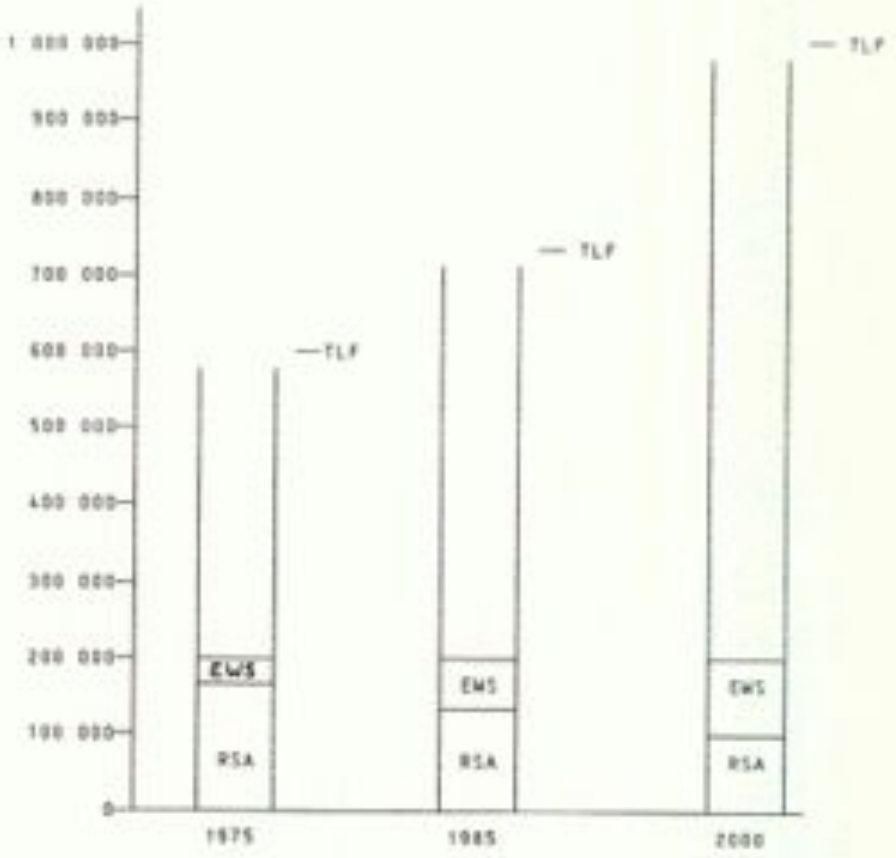
PROJECT	FUNDS	DIRECT COSTS (M)	CONSTRUCTION PERIOD	REMARKS
C. FUTURE PROJECTS (FUNDED)				
Thetsane-Ruthe Road	KfW	2.850.000*	1/85-3/86	Road Construction (and Major Bridge)
Ramabanta-Semonkong Maintenance	KfW	240.000*	1/85-12/86	Road Drainage Works
Sehlabeng Conservation Works	USAID	274.000*	4/85-3/87	Terracing, Donga-Control, Tree Planting
Urban Works, Maseru	Various	55.000 p.a.*	On-going	Various
BASP + LTC Road Maintenance	KfW	72.000*	1/84-12/85	-
Manonsonyane Access Road	WEMIN	620.000*	4/85-3/86	Road Construction
TY & Mafeteng Urban Project	CIDA	800.000*	4/85-10/87	Urban Streets

Notes: (i) All costs apply to middle of "Construction Period"
(ii) * Estimated cost
(iii) ** Expenditure to date

APPENDIX 4

LESOTHO: DISTRIBUTION OF EMPLOYMENT (1975-2000)

KEY: TLF = total labour force
EWS = employed wage sector (in Lesotho)
RSA = employed in RSA



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PERSONS INTERVIEWED

Mrs E Borady	Director USAID, Maseru
Ms Judy Bryson	Independent Consultant
Mr N Cholu	Economist, Ministry of Works
Mr Hamish Goldie-Scott	LCU Group Engineer
Mr William Haugh	Ministry of Works
Mr Rudolf Jalakas	Advisor Prime Minister's Office
Mr David Jennings	LCU Training Advisor
Mr Ove Johansson	ILO expert
Mr Roy Johansson	SIDA Development Co-operation Office, Maseru
Mr Kizilyalli	Advisor CPDO
Mr Motebele J Mabathoana	Labour Commissioner
Mr Marumo	Chief Engineer, Roads Department
Mrs Moji	Deputy Director of Planning, CPDO
Mr Motha	Ministry of Co-operatives and Rural Development
Mr Seimer	Ministry of Interior
Mr M P Sejanamane	Director Planning, Ministry of Planning
Mr S Selatile	Ministry of Co-operatives and Rural Development
Mr Tony Simms	Manager LCU
Mr Pierre Simonet	Advisor Central Bank
Mr Gary Taylor	Senior Engineer, LCU
Mr T Thakoa	Budget Controller, Ministry of Finance
Mr Carl-Erik Wiberg	Resident Representative UNDP

COMMENTS REGARDING OPTION 1 (CHAPTER 8) SUBMITTED BY MISSION MEMBER A T LEHOBO

Contrary to the Mission's conclusion that option 2 is the most advantageous, I strongly favour option 1. The following are my comments regarding the arguments raised against this option:

Capacity - It is up to GOL to utilize fully and effectively the services which LCU is able to provide.

Donor Funding - This problem is common to all 3 options.

Tendering - There should be a planned programme of work for LCU. All GOL capital projects which are suitable to be carried out by labour-based techniques should be implemented by LCU.

Limited Career - Up to now LCU has never had any clear development policy, it has been muddling through. With a clear policy, career development opportunities for staff exist and there is potential to attract qualified staff.

- Moreover the situation is common to all 3 options.

Road Ambiguity - This is arguable when one considers Road Design Standards, objective of each department, etc, e.g. MCRD's Food-for-Work Unit exists purely for food relieve purposes on self-help basis.

Referring to major constraints on page 56, I have the following comments:-

Constraint (a) - This has been so until recently when MOW decided to permanently establish LCU as one of its branches. Many GOL Ministries are well aware of the existance and operations of the Unit. In the past Acriculture used the services of LCU and Interior is still using the services of the Unit. However ministries like Agriculture have lots of free donated machines and consider LCU very expensive and an absolute waste of time.

Constraint (b) - This should not be a problem as long as the Labour Advisor in CPDO can ensure that there is a planned programme of work for implementation by LCU.

Constraint (c) - LCU is a government organization which is presently managed by consultants and like all other government departments it uses GOL wages and salary rates.

- Shortage of middle level, qualified technical supervisory staff is common to all GOL departments especially those which are evolving like LCU. Training is the solution and LITY exists to serve this purpose.

Constraint (d) - This will only be solved by a strong and powerful Labour Advisor placed in CPDO and the resurrection of Co-ordinating Committee.

Constraint (e) - With Labour Advisor in CPDO, LCU will purely be implementing organization.

Option 2 - In principle the option appears good and it is favoured by SIDA mission. In practice this option is going to fail miserably under the prevailing conditions in the country as a whole and especially under the implied rush. Everybody witnessed the drop in the high level of performance by LCU during the period of its incooperation into Roads Branch (MOW) between 1980 and 1984. Integration into Roads Branch will mean natural death to LCU. Setting up of LCU's in various GOL ministries in such a rush is an absolute risk. This will be totally dependent on donor funding for technical assistance which means funding of SWKP's as many as the number of new LCU's, training, projects, etc. Moreover constraint (c), shortage of qualified local personnel, will be even worse with too few staff to go around.

Conclusion Recommends implementation of MOW Policy Document on LCU, August 1985. Evolution of LCU's in various ministries should be the off-springs of LCU (MOW) over a period of time under the influence of the Labour Advisor in CPDO and the work of LITU.

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LABOR INTENSIVE WORKS IN LESOTHO

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These are the main findings of this evaluation carried out by *Karlis Goppers*, economist from SIDA's Evaluation section, *Geoff Edmonds* of ILO, an expert in labor based technology, and *Mikael Söderbäck* representing SIDA's Industry Division.

The mission discusses several options on how these objectives may be better attained and recommends that each ministry develop its own capacity to utilize labor based technology.

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