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WORLD EMPLOYMENT PROGRAMME

**THE KENYA RURAL
ACCESS ROADS PROGRAMME**

Report of the Joint Donors Review and Evaluation

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Review and Evaluation Report of the Kenyan Rural Access Roads Programme

Preface

The Ministry of Works, recognising the need for a consolidated approach to the review and evaluation of the Rural Access Roads Programme (RARP), requested all donors providing funds to the Programme to come together in a joint meeting. They further requested that a joint review and evaluation report should be prepared which would reflect the consensus view of all donors. To this end they suggested that the ILO, through Dr. G.A. Edmonds, should co-ordinate the production of this report.

It was implicit in the MOW request for a joint donor report, and made explicit at the Preliminary donors meeting held in early February 1978, that the report would be the authoritative and authentic consensus view of all the donors. It was further accepted that a joint donor review and evaluation would minimise the number of individual donor evaluations so as to reduce the burden on the RARP management.

All donors readily agreed to these requests and a meeting was convened between 13 and 23 March 1978. Appendix 1 presents the list of participants at the meeting.

The meeting was structured to provide maximum opportunity for discussion and assessment of all aspects of the RARP. The first two days were spent on a review of the work to date and a discussion of the present position of the RARP. This was followed by a series of site visits which provided an opportunity for donor representatives to see the work in progress and to discuss the Programme with the RARP field staff. The final stage of the meeting was concerned with a detailed evaluation of the RARP. This consisted of a full examination of those aspects of the RARP which all donors felt were of importance. A summary of the conclusions and recommendations is presented at the beginning of this report.

Finally the donors wish to express their appreciation for the efficient way in which the Ministry of Works organised the meeting. The background documentation was comprehensive and well presented, the site visits provided an excellent opportunity for donors to experience the Programme at first hand and the Ministry of Works officials were extremely helpful in responding to requests for information.

Part I is a review of the RARP incorporating as appendices the background documentation presented by the Ministry of Works. Part II is an evaluation of the Programme.

APPENDIX I

Rural Access Roads Programme
Annual Review and Evaluation Meeting
List of Participants

UNITED KINGDOM

1. Mr. K. Philipps
2. Mr. B. Dolton
3. Mr. J. Casnin
4. Dr. H. Bofinger

NETHERLANDS

1. Mrs. E. Badon Ghijben
2. Mr. J.G. D. Hoogland

WORLD BANK

1. Ms. M. Mason
2. Dr. C. Harral
3. Mr. C. Willoughby
4. Mr. B. Bjelogrić
5. Mr. H. Kaden

USA ID

1. Mr. W. Jones
2. Ms. L. Douris
3. Mr. S. Shah

MIN. OF FINANCE AND PLANNING

1. Mr. B. Obama
2. Mr. J.H.O. Kipenda
3. Mr. J.O. Obobgo
4. Mr. O.A. Wafula

MIN. OF LABOUR

1. Mr. P.M. Nwibia
2. Mr. C. Wangia
3. Mr. J.M. Otenyo

MIN. OF AGRICULTURE

1. Mr. J.K. Gachui

NORAD

1. Mrs. E. Bjordal
2. Mr. R. Sorensen
3. Ms. M.N. Johansen

EEC

1. Mr. Rook

ILO

1. Dr. G.A. Edmonds

UNDP

1. Mr. R.W. Kitchen
2. Mr. T. Cox

SWITZERLAND

1. Mr. F. Rohner
2. Mr. A. Wiederkehr
3. Mr. W. Harder

MIN. OF WORKS

1. Mr. S.J. Mbugua
2. Mr. N.P. Radier
3. Mr. P.H. Dennis
4. Mr. J.A. Simpson (ILO)
5. Mr. P. Wambura
6. Mr. L. Corbett
7. Mr. B. Nilsson (WB)
8. Mr. K. Butcher (ILO)
9. Dr. J. Rolt (THRL)

DANIDA

1. Mr. J. Muller
2. Mr. B. Nielsen

APPENDIX II

Proposed Donor Participation by District

UNITED KINGDOM

1. Nyeri
2. Kwale
3. South Nyanza
4. Nyeri 2
5. Nyeri 3

NETHERLANDS

1. West Pokot
2. Trans Nzoia
3. West Pokot 2
4. Elgeyo Marakwet
5. Kitui
6. Kitui 2

WORLD BANK

1. Kirinyaga
2. Nakuru
3. Meru
4. Embu
5. Muranga
6. Kericho
7. Kiambu
8. Nandi

USA ID

1. Kisii
2. Bungoma
3. Kisumu
4. Kakamega
5. Busia
6. Siaya
7. Kakamega
8. Bungoma

DANIDA

1. Kwale
2. South Nyanza
3. Machakos
4. Uasin Gishu
5. Kirinyaga
6. Nakuru
7. Nandi
8. Trans Nzoia

EEC

1. Machakos

NORAD

1. Embu
2. Meru
3. Kwale
4. Machakos
5. Kisii
6. Kitui
7. Elgeyo Marakwet
8. Embu
9. Meru
10. Muranga
11. Kiambu
12. Kisumu
13. Siaya
14. Busia
15. Uasin Gishu

APPENDIX III

Breakdown of Targets and Key Events April 1978 - February 1979

- a. Target number of units to bring into operation (specify which month each unit to begin operation) - total target kilometrage to be completed per month.
- b. Planned departure and arrival of individual engineers in the field and at HQ - specify whether expatriate or Kenyan.
- c. Target output of numbers of staff trained - overseers, Officers-in-charge. (STD already have this in a form which could be easily incorporated into this schedule).
- d.
 - (i) Planned completion of pre-investment reports by individual district;
 - (ii) Planned implementation of Impact Study - arrival of Development Economist, target number of farm and traffic surveys per three months.
- e. Procurement of tools, equipment, vehicles, etc.
 - (i) Planned month for preparation of tender documents - specify total amount and for how many units.
 - (ii) CTB decision -
 - (iii) Arrival of goods.
- f. Planned finalisation and implementation of administrative, planning and reporting and other procedures.
- g. Status of financing for all units that will be operational during the year, and targets for obtaining necessary financing if not already committed.
- h. Mention external events that may effect implementation of programme.

We recommend that the dates of the above critical events are shown (by month only) in a schedule that is attached to every quarterly report. No doubt, the progress report will enlarge on the reason for any "critical events" that were not met during the previous quarter, and the repercussions of such delays on program targets in the future.

Summary and Recommendations

1. General

All the donors are very much aware that the RARP is a new type of Programme not only for the Ministry of Works (MOW) and Kenya but also for Africa. The use of effective and efficient labour-intensive methods of road construction is a concept that is alien to many engineers and planners. The donors would therefore like to express their admiration for the way in which the Ministry of Works have committed themselves to this Programme and have attempted to make it as successful as possible.

The build-up of the Programme has been slow but it is accepted that at the same time as dealing with the day to day management of the Programme the MOW has also had to modify and adapt its existing management and administrative systems to the needs of the RARP.

The Programme is now in a major growth period. It was therefore very timely that the donors should meet with the Min. stry of Works to assess the present and possible future status of the Programme. It is fair to say that all donors have been concerned to evaluate the Programme in a spirit of support for the MOW's efforts. Whilst each donor has his own criteria to fulfil, the recommendations that have emerged from the review and evaluation discussions are orientated towards assisting the Ministry of Works in their task of implementation of the RARP.

The donors are generally very satisfied with the way in which the Programme is developing and they would like to record their general satisfaction with the way in which the MOW is managing and implementing the Programme..

2. Specific

Whilst the recommendations presented here are generally listed under certain headings, there are two issues which the donors felt were of such over-riding immediate importance that they should be presented separately.

Headquarters Staff

The headquarters staff of the Rural Access Roads Programme is presently heavily overloaded and it seems clear that in the coming months, with the loss of certain staff and the rapid growth envisaged, the headquarters staff will be stretched to a limit. Efforts are being made to fill the presently vacant posts. However the donors feel that the build-up of the full headquarters staff for the RARP is extremely important and that this should take precedence over the achievement of the presently planned growth rate of the RARP for the year 1978.

The MOW have stated that the existing staff structure when fully operational will be capable of dealing with the growth in the Programme. The donors would wish to be informed, at the earliest opportunity, of any deterioration in the situation and if extra personnel are considered necessary.

Procurement of Tools

The donors recognised the importance that the Ministry of Works attaches to this issue. They also appreciate the efforts that the Permanent Secretary has made to try and solve the existing problems. Furthermore the donors are unanimous in their support of the Ministry of Works principle of requiring good quality specified hand tools for the Programme. They share the MOW's concern that MOW's recommendations on this issue may be rejected or modified. They therefore wish to be informed as soon as a decision is taken on this issue and if a negative answer is received a local donors' representatives meeting should be called immediately to discuss the implications with MOW. The donors are fully aware that this issue could drastically limit the growth of the RARP.

The remainder of the recommendations are now discussed under the headings presented in Part II of this report.

Target Number of Units and Output

- (a) The donors wish to be informed by the time of the next meeting of the total number of units, the expected total output, and the implementation period then envisaged for the Programme.
- (b) In relation to (a) the donors recommend that the Government should reconsider how far to go beyond the number of units for which finance is already requested (i.e. 52 units). They further recommend that the annual output of the Programme should be related to the satisfactory setting up of units, the efficient operation of headquarters staff, the smooth take-over of maintenance of the RAR and last, but not least, the actual demand.
- (c) The donors request that an Implementation Schedule should be prepared by the Ministry of Works which would indicate the main events and decisions to be taken for the Programme so that bottlenecks and obstacles to the growth of the Programme can be foreseen.
- (d) The donors are pleased to note that it is MOW's policy to consider the use of labour-intensive methods in other programmes apart from the RARP. The donors fully support this policy and would be willing to assist it.
- (e) As the RARP has a defined life the donors request that by the next review meeting the MOW draw up plans for the future construction programme to be carried out by the RARP organisation when the present rural access road construction programme is completed particularly in respect of the organisation and resources that will still be available at that time.

Road Maintenance

- (a) Whilst being quite satisfied with the maintenance system that has now been implemented for the RARP, the donors are concerned by the implications of the hand over of this maintenance system to the provincial engineers offices in view of the fact that the existing maintenance organisation of the MOW is already severely strained. Although the maintenance of the classified

road network is outside the scope of the RARP, the donors wish to ensure that the present efforts being made to increase the capacity of the maintenance organisation of the MOW fully takes account of the consequences of the maintenance of the 14,000 Kms. of rural access roads.

- (b) To ensure the complete integration of the maintenance of the RARs the donors recommend that the Provincial Engineers offices and the Maintenance Branch are fully involved in the selection of roads for the RARP.

Tools and Equipment - Procurement and Maintenance

The procurement of hand tools has been dealt with above.

- (a) The donors recommend that, in the quarterly progress report, the MOW should report on the adequacy of the supply of tools to the individual RAR units.
- (b) It is recommended that at such locations where no local facilities for maintenance of hand tools are available the units could be equipped with simple equipment for routine maintenance of hand tools.
- (c) In view of the amount of expensive equipment now being provided for the programme the donors would support the suggestion that a master mechanic should be posted to the RARP headquarters. It would be his responsibility to ensure proper maintenance of the equipment and to monitor the timely supply of spare parts to Programme.

Selection and Evaluation Criteria

This was one of the few issues where there was not total consensus amongst the donors. This lack of consensus relates more to the actual content of the selection criteria. In general the donors feel that the orientation is great but there is a disagreement upon detail.

- (a) The donors feel that it is extremely important that the selection criteria are well explained to the District Development Committees and to the RAR engineers. This should be done either in the field or by way of meetings at the Ministry of Works Headquarters.
- (b) It was felt that the present format of the guidelines for the selection and evaluation criteria does not adequately explain the criteria in a comprehensible fashion and should be improved.
- (c) It is recognised that the Government sees the RARP as part of an over-all rural development strategy and that efforts are being made to integrate it at the grassroots with complementary activities. They strongly support this policy and urge that every effort is made in the selection process to ensure that the construction of RARs are integrated with the proposed complementary activities.

- (d) It is recommended that efforts should be made to identify roads in all divisions of each district by March 1979 so that there is an equitable distribution of roads in all areas of the district.
- (e) It is recommended that MOU should review the timing requirements for the on-site inspection by the Planning Unit engineers of proposed roads for the Programme. This will ensure that sufficient time is given to this important part of the selection process.

Staffing

- (a) Whilst recognising that the number of Kenyan engineers in the programme is related to the number available in the MOU, the donors are pleased to note the policy of putting graduate trainees through the RARP is to be continued. Donors would like some indication of how many this will involve in the coming year.
- (b) It is also suggested that one way of making Kenyan engineers more aware of the efficient use of labour-intensive methods and RARP in particular, was at the university. The first step in this direction could be made by discussing with the university authorities the inclusion of this aspect as part of the under-graduate courses.
- (c) The donors have recommended that the quarterly progress report should provide information on the output of OICs and overseers from the staff training department.

Planning and Reporting

The donors were pleased to note that an effective system of planning and reporting has now been developed and that this will be implemented throughout the RARP as from 1 July 1978.

Report to Donors

- (a) With the modifications detailed in Section B of Part II of this report, the donors accept the format of the quarterly progress report proposed by the MOU.
- (b) The donors request that each donor should receive copies of the various technical reports prepared by the technology unit.

The Impact Study

- (a) All donors feel that this study could be of value to the RARP and the Government. They therefore feel that it should commence as soon as possible so that the results can be of value to the RARP.
- (b) In the light of the above they urge that efforts should be made to obtain the services of a development economist at the earliest possible date. They recommend that other donors be approached if SIDA are now unwilling to provide the services of this expert.

Disbursement Procedures

With the exception of USAID, who have their own agreed disbursement system, and the EEC and World Bank, who need to receive clearance from their respective headquarters, the donors accept the revised disbursement procedures as proposed by the NOW.

Design and Construction Standards

- (a) The donors endorsed the standards developed and now proposed for the RARP. (These are detailed in appendix 8, Table 2). The donors believe that these standards are particularly appropriate to the Programme.
- (b) It is recommended that the NOW's policy of graveling all RARs should be modified. The donors feel that the roads should be gravelled where required to bring them up to an all-weather standard. It is however recognised that the on-going work of the TRRL will provide explicit criteria to determine the necessity for graveling.
- (c) The donors urge that the design standards and construction work methods presently proposed should be standardised for the whole of the RARP at the earliest opportunity.

Date of Next Meeting

The donors recommend that the next Review and Evaluation Meeting should be held in February 1979.

PART I

A Review of the Rural Access Roads Programme

1. Introduction

This review is based upon the background documents presented by the Ministry of Works. These are appended as appendices 2-10. It is not intended, therefore, in this part of the report to reproduce a précis or parts of these appendices. They are considered as an integral part of the review report. The main text of the review report provides the consensus opinion of the donors on matters arising out of these appendices.

2. Present and Future Financial Assistance¹

On the assumption that donors will continue the financing of units to which they are presently committed up until 1982, there will be 52 units in operation at that time. By the end of 1982 the Programme will have constructed 10,102 Kms. of road based on a unit output of 45 Kms. per annum.

The target output of the Programme is still 14,000 Kms.² The implication therefore is that either additional units will have to be established so that this target can be reached by the end of 1982 or the Programme will have to be extended with the present level of commitment until the end of 1984. The latter seems the more likely because even if finance was obtained now for additional units it would not be possible, due to administrative and organisational constraints, to spend that money for another 18 months. Furthermore additional units, over and above the present commitment, set up in 1980 or 1981 would have a limited impact on the over-all output.

To ensure that the NOW can plan effectively for the development of the Programme the donors will, in the near future and to the extent possible, provide a clear indication of whether their present commitments will be extended.)

3. Progress to 31 December 1977⁴

In general, progress has been good and, whilst output is somewhat lower and costs some 14% higher than originally envisaged, it appears likely that the original targets will be achieved. The trend over the calendar year 1977 has been for costs per kilometre

¹ See Appendix 3.

² See Part II section 1.

³ It should be noted that the United Kingdom commitment, bracketed in Appendix 3, Table 1, is now firm up to 31 March 1980.

⁴ See Appendix 4

constructed to fall and for output to rise. Nevertheless certain points are worth elaborating further.

Gravelling - Only 23% of the roads constructed have so far been gravelled. Measures now being taken by the MOW should improve this situation. It is presently MOW policy to gravel all roads. This policy may be modified in the light of the work presently being undertaken by the Transport and Road Research Laboratory (TRRL). (This is discussed in Section 7 and Part II Section 11). Even if the policy is relaxed however the MOW are confident that they will not be over-committed in terms of the purchase of equipment for the gravelling operation.

Maintenance - The maintenance system for the RARP described in Appendix 6 is now being established and finance has been allocated. When the system is fully operational it is intended to transfer maintenance activities and organisation to the Provincial Engineers offices.

Procurement - The procurement of equipment continues to be a problem as the equipment cannot be ordered until donor financing is secured. There is a considerable time lag of as much as 6-9 months between placing the order and receiving the equipment. This naturally creates a time lag between commitment of funds and the actual execution of work.

The procurement of tools has been a major problem for the Programme. The supplies branch of MOW has been unable to supply the quantity and quality of tools required. For this reason the Permanent Secretary has decided to allow the Programme to let tenders directly. The Chief Engineer (Roads) now calls for tenders. When they are received recommendations are then made to the Central Tender Board (C.T.B.). It is, however, the final responsibility of the CTB to accept or reject tenders. To date most of the tenders received have been of an acceptable standard. However there is still some doubt whether CTB will accept the principle of paying a higher price for a better quality tool. Studies carried out by the Technology Unit have clearly indicated that a well designed and manufactured tool has a much longer life than those generally supplied to the MOW.

Engineering Staff - The situation as regards the provision of engineers to the programme has improved greatly since the last review meeting. Of the 14 posts required for the Programme only 2 are vacant. However there will be a large turnover of expatriate engineers during this calendar year. Furthermore it is likely that the number of Kenyan field engineers in the Programme will decrease. This, to a certain extent, is a function of the MOW training programme for graduate engineers. Further, as discussed in Part II, Section 5, the staffing at headquarters is a major problem.

Maintenance of Equipment - This is presenting problems as the RARP itself does not have the capacity to deal with it. It is presently suggested by MOW that this should be carried out by the Provincial Engineers Workshop.

Output - The actual output in terms of kilometres built is very satisfactory. However there have been rather major variations both between units and in particular units from one year to the next. The reasons for this have been the turnover of engineers, labour supply problems and heavy earthworks in certain areas. The reporting system between headquarters and the units presently being implemented should provide the means to monitor and control these variations.

4. Development of the Training Programme¹

In general this has been very satisfactory and the Staff Training Department (STD) is certainly capable of meeting the demands laid upon it. The problems here are more in relation to recruitment and career development. As far as recruitment is concerned it has been difficult to find suitable candidates for the Officer-in-Charge (OIC) courses.² This is less of a problem for the overseer's courses.

It should be noted that whilst an allowance has been made in the planning of courses for a wastage due to failure of the courses, no allowance has been made for the loss of overseers and OICs to the private sector or other areas. There has, however, so far been very little wastage to the private sector.

Discussions are presently taking place with the Personnel Department of the MOW to ensure that the staff policy and career development structure can incorporate RARP overseers and OIC's more equitably.

5. Work of the Technology Unit³

The work of the Technology Unit has clearly contributed a great deal to the effective running of the Programme. The details of that work is well covered in Appendix 6 and only a few additional points are raised here.

The labour supply study has indicated that the great majority of those employed on the RARP are from the lowest income groups. Furthermore there is generally no shortage of labour for the Programme except in specific areas at specific times of the year related to harvesting of crops. This is presently being overcome by careful planning and phasing of the work.

The work on tools and equipment has indicated that there is capacity within Kenya to produce the majority of hand tools required. This will involve not only large manufacturers but medium and small ones as well.

¹ See Appendix 5.

² Efforts are now being made to recruit potential OICs from the private sector. However this will require clarification with the Personnel Department.

³ See Appendix 6.

6. Maintenance of Rural Access Roads¹

Whilst maintenance has been discussed earlier in this report it is worth emphasising the uniqueness of the system that has been developed for the RARP and described in Appendix 7.

The question of maintenance is also discussed critically in Part II, Section 2 of this report. Tentative figures for the cost of maintenance for the RARP are given in Appendix 7 and, although they are indicative only, they do indicate that serious thought must be given to the question of the organisation, financing and administration of RARP maintenance.

7. Characteristics of Rural Access Roads²

The design standards of rural access roads have evolved over the life of the RARP. In general the standards are high except in the case of camber and depth of drainage ditches. Steps are now being taken to rectify the latter problems.

The question of graveling policy has already been touched upon and, again, is dealt with more extensively in Part II of this report.

8. Compaction for Rural Access Roads³

The studies carried out so far by the TRRL indicate that indirect compaction, i.e. that produced by the effect of climate and traffic, can achieve a suitable standard as long as an appropriate construction schedule is adhered to. At the present time there is no evidence to suggest that the level of maintenance for a road constructed with indirect compaction need be any different from that required when direct compaction is used.

9. Selection and Evaluation Criteria for Rural Access Roads⁴

In addition to the information provided in Appendix 9, certain other points regarding the selection procedure are relevant. The zone of influence of roads assessed varies from 52 hectares to 380 with an average of 160. The population in the zones of influence is on average about 200 with an upper and lower limit of 510 and 70 respectively. In densely populated areas the length of road is around 5 Kms. whilst in sparsely populated areas the length can be as high as 25 Kms.

¹ See Appendix 7.

² See Appendix 8.

³ See Appendix 9.

⁴ See Appendix 10.

It is worth noting that emphasis has been placed on the selection of roads at the District level coupled with selection criteria which are orientated towards the needs of the mass of the population. The selection criteria are based on: (a) economic and social benefits; (b) engineering standards; and (c) integration with other development projects. The emphasis of the selection procedure is upon the needs, both economic and social, of the rural areas. The procedure is deliberately simple and only uses cost/benefit analysis for groups of roads and then specifically for the purpose of final verification of the need for the roads.

The idea of each District Developing Committee (DDC) providing a list of 600 Kms. of road to be assessed in the first instance has now been abandoned as being impractical. Furthermore revised guidelines are now in preparation to assist the DDC's in their selection of roads.

It has been assumed that 60% of the benefits identified in the selection procedure are attributed to the road. The rest is attributed to the complementary rural development activities. An attempt is being made to ensure that the complementary activities do take place. Close liaison is envisaged with the Rural Works Programme, administered by the Ministry of Finance and Planning and the Integrated Agricultural Development Programme, administered by the Ministry of Agriculture.

The DDCs play a vital role in the selection of roads for the RARP. Because of this and the fact that the selection criteria being used are pioneering in their concept, these issues are discussed more fully in Part II of this report.

With regard to the evaluation of the roads being built under the RARP, this is to be carried out under the co-called Impact Study financed by the World Bank, USAID and CCK. This study is not yet under way. Nevertheless it is clear that all donors have an interest in the results of this study. For example, it is already known that the average daily traffic on the roads constructed so far is 18 vehicles.¹ It is not yet known however from what activity they originated and to whom, therefore, the benefits of access are accruing.

10. Disbursement

Until now the RARP management has been able to deal with disbursement and reimbursement from donors adequately on a quarterly basis. However to ease the cash flow situation the Ministry of Finance and Planning has instructed that disbursements should be made on a monthly basis. To overcome the consequent problem the MOW has suggested the following solutions:²

¹ This comprises: 7 cars, 8 light goods, 3 medium goods. It should however be recognised that this average is taken from a very small sample and is therefore indicative only.

² This procedure relates to running costs only.

- (a) 80%¹ of the monthly cost figures received by MOW Headquarters from the RAR units would be submitted directly to the Ministry of Finance and Planning and thence to the respective donor for reimbursement.
- (b) The donor would be welcome at any time to check the vouchers at RAR headquarters against the sum that he has been requested to reimburse.
- (c) Every four months the MOW will submit a detailed breakdown of the running costs incurred as is done presently.

The implications of this proposal are discussed in Part II of this report.

11. Reports

Presently the MOW submits a detailed report to each donor of the progress and situation with regard to the units that he is financing. With 7 donors in the Programme this will become a heavy burden on the management. MOW has suggested that they will prepare a detailed report on the whole of the RARP every three months. This will be sent to each donor with an Annex which describes the situation in relation to those units which the donor is financing. This will reduce the amount of time and effort required of the RARP management and could be a satisfactory solution for the donors.

¹ In the case of the World Bank this would be 60%.

PART II

Evaluation of the Rural Access Roads Programme

1. Target Number of Units and Output

The revised loan application¹ prepared by the Ministry of Works states that the Rural Access Roads Programme has as its objective the construction of 14,000 Kms. of road. This will be executed by a total of 74 Rural Access Road Units. It is proposed that 600 Kms. of access road will be constructed in each of the 23 districts where the RARP will be operational. It is presently envisaged that the Programme will be completed by 1982.

Whilst recognising that it was useful in the initial stages of the Programme to set out various targets the donors feel that these targets should be reappraised in the light of financial commitments made and requested.

The targets have been set by the Ministry of Finance and Planning and the Ministry of Works will, in the near future, be discussing with them whether the targets originally set are still realistic.

So far, firm commitments from donors have been obtained for the financing and operation of 40 construction units, equivalent to 1574 unit-months, according to information from the MOW². The decision whether the Government will stand by the initial figure of 74 as the total number of units or whether it should be reduced, rests with the Ministry of Finance and Planning. But the experience so far with the Programme indicates that the Government should reconsider how far to go beyond the number for which finance is already requested, i.e. 52 Units. In the donors' opinion, the annual production or output of roads in the Programme should be limited to comply with the continuous operation of units, with the satisfactory establishment of a full headquarters organisation with a smooth take-over by the maintenance organisation of completed roads, and last but not least, with the actual need for this category of roads in the districts. Furthermore, the implementation period for the Programme presently envisaged assumes that the Programme will grow at the original rate laid down in the loan application. It is suggested that this should not be considered as a fixed date and in fact should be related to the total number of units that are finally put into operation and their efficient implementation.

The figure of 600 Km. of roads to be constructed in each district is considered by MOW as an average planning figure and the actual output will conform with the projected demand in each district.

¹ Revised Loan Application in Respect of Rural Access Roads Programme, Ministry of Works Roads Department, Kenya, July 1975.

² The distribution of these commitments by district is shown in Appendix 11.

Variations in the range of as much as 50% of the average can be foreseen. The MOW believes that the results of the Impact Study will provide useful guidance and may also in many cases be decisive when it comes to determining the actual output per district.

The donors are somewhat concerned with regard to the rate of planned increase in the number of construction units, particularly the target of setting up 36 units by the end of 1978.

MOW have stated that this figure is a realistic estimate provided that the necessary resources, such as equipment, tools and supervisory personnel, are made available. A sufficient number of field engineers can be recruited, but most of them will lack experience for this type of work. There is still some considerable uncertainty as to the practical results of the new procedure for procurement of tools. Therefore, the donors feel that it might be advisable to review the programme for the expansion of number of units in the districts to take account of the limiting factors mentioned above.

In brief, the donors feel that the Programme is now developing well. It would be unfortunate therefore if a rigid adherence to targets set out in the original loan application jeopardised the smooth running of the Programme. Whilst accepting that the total output target of the Programme in terms of kilometres constructed could remain, it is considered that this requires a reappraisal of the total number of units to be set up and the implementation period.

Because of their interest in the Programme donors wish to follow more actively the planning and monitoring of the Programme. A proposal was put to the MOW that an Implementation Schedule be prepared and issued to the donors on a semi-annual basis or as agreed. The Schedule would include the main events of the Programme and indicate the main decisions to be taken and at what time.¹

The long-term objective of using labour intensive methods also in other sectors was discussed with the MOW. It is evident, both from the pilot projects of the initial stage of the Programme and from the regular operations so far, that labour intensive methods in the construction of rural roads gives satisfactory results, both with regard to productivity and economy.

It is the view of the donors that, if the RARP is as successful as they believe it will be, the experience and expertise should not be confined to the RARP.

The donors are therefore pleased to note that it is the intention of the MOW to consider the use of labour-intensive methods in other programmes apart from the RARP. Thought should also be given now to expanding the work of the RARP into other infrastructure programmes.

¹ An outline of the proposed implementation schedule, prepared by the World Bank, is attached as Appendix 3.

In relation to programmes of other ministries they suggest that the two engineers to be seconded from the Special Projects Branch of MOV to the Rural Works Programme of the Ministry of Finance and Planning be given a full briefing and explanation of the RARP so that they are fully aware of the potential and problems of effective labour-intensive programmes.

The donors recommend that, by the next review meeting, the MOV draws up plans for the future construction programme to be carried out by the RARP organisation when the present rural access road construction programme is completed. This would be particularly concerned with the organisation and resources that will be available at that time.

2. Road Maintenance

Donor representatives studied and discussed the maintenance system adopted for the RARP, whereby ex-labourers from the construction units are contracted to carry out routine maintenance operations on sections of road varying from 0.5 to 2.5 Km. in length and near their homes. They also observed the initial results of the system as practised on a number of completed roads in the various districts visited during the field trips.

Donors cannot over emphasise the importance with which they regard the provision of an adequate maintenance system. In general they are satisfied that the present system is working well and is currently considerably less costly than machine orientated methods.

Not unexpectedly the effectiveness of the system varies from road to road and even on adjoining sections of the same road. However, it is accepted that the method of "payment-by-result" ensures, to a reasonable degree, that the work can be effectively controlled. The donors further accept that there is only limited experience of operating the system to date and that future allocations of road length and the level of supervision will be reviewed on the basis of performance as monitored under the programme being implemented by the UK Transport and Road Research Laboratory (TRRL).

Any substantial emergency and/or seasonal maintenance requirement is currently undertaken by co-ordinating the efforts of all the maintenance workers on the affected road or by a special task force from the construction unit. Work of this nature has not been significant and has not been considered in determining the average annual maintenance cost to date of K.Shs. 1100/Km. It is understood that the anticipated allocation in the Recurrent Budget for 1978-79 is equivalent to approximately K.Shs. 1600/Km. and as such the Special Projects Branch are confident that this is more than adequate to cover anticipated costs, including the non-routine work referred to previously.

The donors are rather more concerned, on a number of counts, at the implications of handing over the maintenance of the RAR's to the existing maintenance organisations administered at Provincial level.

The maintenance of the classified system is generally unsatisfactory and the donors' concern is focussed on the fact that the effectiveness of the RARP might be reduced by a failure to

properly maintain the classified roads to which the RARs give access. Whilst recognising that it is outside the scope of the RARP management's responsibility donors would like to stress the importance of proper maintenance of the classified system in ensuring the effectiveness of the RARP.

It is understood that the present intention is to hand over a 'working package', including supervisory and administrative staff. The Maintenance Branch is currently responsible for some 50,000 Km. of classified roads, countrywide. When completed the present RARP target of 14,000 Km. would increase this by approximately 30% and whilst it is accepted that the additional staff requirements up to Senior Inspector level will be more than met by redundancies from the RARP. The donors are conscious of the implications of the increased work load on existing professional staff.

The donors are aware that both the central administration of the Maintenance Branch and representatives of the PREs offices are involved in the planning of the Programme to a certain extent. In view of the significance of their future role in the maintenance not only of the RARs but, equally important, of the classified roads into which they lead, donors would like to see more involvement, particularly in respect of the selection of roads, to ensure effective integration of the RARP and other on-going betterment programmes.

The present estimate of recurrent expenditure on the maintenance of the entire 14,000 Km. RARP is K.Shs. 56 million, representing a sizeable increase in the Recurrent Budget. The donors are concerned at the magnitude of this increase, particularly when compared to the present allocation of about K.Shs. 160 million to the Secondary and Minor road network, but accept the Special Projects Branch's assurances that the Treasury are wholly committed to the Programme and completely aware of the extent of funds required for future maintenance.

The labour intensive maintenance system adopted for the RARP would appear to be suitable for application to other roads within the classified network. Donors were therefore encouraged to learn that a 4-year programme of investigation is already underway in Western and Nyanza provinces and that the intention is to implement pilot scale labour-intensive operations on other classes of roads with a view to subsequently extending this system as far as possible. The donors request that MOW keep them informed of the progress of this study.

The consensus of opinion amongst donors is that a phased hand-over during the currency of present financing agreements would be desirable. However, it is recognised that the Maintenance Branch is currently under considerable stress and that to commence hand-over of the maintenance of RARs would be an unnecessary additional burden at this time. It was therefore suggested that the hand-over be deferred until the graveling and culverting programme and present efforts to improve the efficiency of the Maintenance Branch have been at least partially completed, but that a report of the proposed handover system, including an implementation schedule, should be presented at the next review meeting.

A further suggestion was that the maintenance of the roads should be handed over to the local authorities. This could ensure that the popular participation in road construction was carried over into their maintenance.

It was suggested that a member of the Maintenance Branch would be a useful additional participant in future review meetings.

3. Tools and Equipment - Procurement and Maintenance

General Observations

At the annual review meeting in January 1977 it was noted that the RARP, being a new type of Programme for the Ministry of Works, was experiencing a certain amount of conflict between the type of administration and organisation structure within the Ministry of Works.

Whereas many of the conflicting matters have been resolved during the past year one, in particular, has, as yet, not found a fully satisfactory solution. This concerns the procurement of hand tools. One other problem that needs to be resolved is the establishment of a satisfactory system for the maintenance of the RARP travelling equipment.

This section of the donors evaluation, therefore, goes into these points in some detail.

Procurement of Tools

Although only accounting for approximately 5% of the cost of the RARP, hand tools make up an extremely important component of this labour-intensive programme. In fact, it would be equally justified to call the programme tool-intensive as opposed to equipment or plant-intensive.

This fact was recognised in the original design of RARP, and particularly in the terms of reference for the Technology Unit (TU) which made provision for 2.5 man-years of advisory input on hardware development and manufacture. A wide range of designs and qualities of tools has been tested and improved designs have evolved, supplemented by protracted work study trials. The result of these efforts is now laid down in a series of detailed tools specifications and blue prints. Production capacity and capability in Kenya to comply with these specifications was also identified.

However, and this was no surprise to the RARP and TU personnel, tools made to the specifications so developed, invariably turn out to be more expensive than seemingly similar tools traded in the country. For example, a wide range of jembes (hoes) are traded, but most of these are made for all kinds of agricultural purposes, most of which, cannot be compared to the heavy and hard jobs of road and gravel-pit excavations. Wheelbarrows are another case in point; it should be evident that in general the cost of a wheelbarrow for earth-haulage would tend to be higher than the cost for one meant for, say, cow-dung moving.

The range of cost differences in question is of the order of 20% (for shovels) and up to 400% (for wooden handles for jembes etc.). These differences must, however, be viewed against the reversed differences in durability (life time) of the tools in question. These range between 50% (for jembes), 200% (for wheelbarrows and shovels) to as much as 1000% (for handles).

Cheap tools have a shorter life and limited durability. A rough estimate suggests that buying the cheap tools will result in a yearly extra direct cost to the RARP (with 52 units in operation) in the order of 2 million K.Shs. (The TU is in the process of detailing this estimate). The donors were equally concerned with the consequent loss of productivity due to the use of sub-standard tools.

The whole point of conflict, and our reason for detailing it as above, stems from an established and otherwise perhaps sound principle of the MOW Supplies Branch of buying the cheapest tools available on the market. Firstly, the RARP and the Roads Department have not succeeded in convincing the Supplies Branch to make an exception to their principle. Secondly, the Supplies Branch have been unable to supply even sub-standard tools in the requested quantities.

After a procurement delay of some 6 months the Permanent Secretary consequently decided to permit the Roads Department to go to tender itself (January 1978). By the end of February 1978 bids were received and the Roads Department is now submitting its recommendations to the Central Tender Board (CTB) for final adjudication.

If CTB also adhere to the principle of cheapest purchase they might still decide against the RARP recommendations. CTB could either reject the tenders completely and refer the matter back to the Supplies Branch, or make alternative recommendations in favour of sub-standard tools.

A complete rejection would result in RARP not being able to expand towards its targeted 36 units by the end of 1978. In fact, it is likely that some of the units presently in operation would have to stop working. The donors noted that bringing 30 units to a halt, corresponds to a loss of 9000 jobs. (Incidents of halts in operation have already occurred in some units for lack of tools).

CTB alternative recommendations will inevitably result in loss in productivity and higher construction costs as explained above. Certainly, more jobs will be created, but in an unacceptable, unproductive manner.

In view of these possible prospects, the joint donors therefore express their grave concern and request MOW to report back before 1 May on the outcome of CTB's decision, and in case the answer is negative, to convene an immediate meeting of donors local representatives for discussion on possible alternatives, to prevent RARP collapse or frustration.

Another important point pertaining to tools procurement concerns the timely deliveries of tools. The magnitude in question is of the order of 90,000 items of hand tools (e.g. shovels, jembs and pangas) 150,000 wooden handles and 2,000 wheelbarrows. Thus, even if UTB replies in the affirmative to RAMP recommendations, the problem of actual supply of these between July 1978 and July 1979 remains to be solved.

The donors therefore request MOW to report specifically on this question in the quarterly progress report.

Maintenance of Hand Tools

Even high quality tools need maintenance and repair. It is recommended that, at such locations where no local facilities for maintenance and repair are available, the units in question may be equipped to cater for their needs. For example, the sharpening of many of the tools could be facilitated by the provision to the units' base stores, of grinding wheels and honing stones.

Even hand tools need spare parts at times, e.g. rivets, washers and handles. These could be kept in store as well.

Procurement of Equipment

The procurement of equipment has been adequately dealt with through CITE tenders. However, delays in actual deliveries were experienced, and may still be.

In addition to the 16 tractors in operation at the moment, 204 new 45 HP tractors (International Harvester) have been delivered to the yard of the Chief Mechanical and Transport Engineer. Their actual delivery to the RAMP units can therefore take place at short notice.

Of the 300 new trailers, 50 have been inspected and approved, and 40 others have been delivered. The remaining 210 will be delivered at an approximate rate of 40 per week from 1 April. (3 different manufacturers are involved in these deliveries).

In other words, all tractors and trailers could be despatched to the existing construction units by 1 July, and immediately to the new units to be established between 1 July and 31 December 1978.

Maintenance and Repair of Equipment

So far the tractors and trailers in operation have been maintained in a relatively satisfactory manner, making use of the District MOW workshop facilities.

However, as the number of tractors is about to rise from 16 to 220, with a corresponding increase for the trailers, severe availability problems are likely to crop up if better maintenance and repair arrangements are not made.

A first step has been taken in that direction. This concerns supplies of spares which the RAMP organizes and stores itself. It has not been deemed feasible to post mechanics to the units, for anything more than minor maintenance because of the problems of adequate supervision. The arrangement is that repairs, other than minor items, should be undertaken by the workshops of the Provincial Engineers.

Delays are likely to occur, and the RARP should therefore make a major effort to detect defects prior to breakdowns.

The donors strongly support the suggestion that a master mechanic be posted to the RARP Headquarters. It would be his responsibility to inspect all the units as frequently as possible to spot and make good defects, and to supervise the maintenance of the equipment in general. He would also ensure that the supply of spare parts to the Units was carried out satisfactorily.

The donors are pleased to note that the supply of spare parts for equipment for the programme has, so far, been effectively dealt with.

4. Selection and Evaluation Criteria

The donors have studied and discussed the selection and evaluation procedures presently used for the determination of the roads to be included in the RARP. While there is general agreement on the importance of establishing appropriate and adequate guidelines for the selection and evaluation of roads, there is some difference in opinion among the donors with respect to the degree of specificity and level of analysis which should be provided in these evaluations. These differences are primarily a factor of varying donor requirements for information upon which approval of programme implementation must be based. There is also some divergence of opinion amongst donors as to the actual criteria to be applied. Such aspects as access for small farmers and to market centres were suggested to be included. However, when donors have studied the new guidelines in detail they will send their comments to the MOW with a view to further discussion.

Revised identification and selection criteria have just been made available by the MOW. The donors feel that the way in which the criteria are presented in these guidelines is not clear and explicit and will not provide DDCs with clearly defined criteria with which to work.

MOW Planning Unit engineers will be responsible for explaining the new criteria to the DDCs. This requires that sufficient time will be allowed in each District for appropriate discussions and/or explanations of the selection process. It is recommended that meetings should be held in Nairobi between Special Projects Branch and the DDCs and also the RAR engineers to explain the criteria to them in detail and to discuss them with them. Discussions should include both the process by which the roads should be selected (i.e. maximising "grass roots" involvement to the extent possible) and the specific criteria for considering individual roads. The RAR engineer will be responsible for the evaluation of the technical feasibility of each road proposed by the DDC. This hopefully will avoid disappointment and frustration brought about by the subsequent disapproval of roads which may be inappropriately included in an evaluation report. The technical feasibility of the road should be related not only to the amount of

earthworks, provision of structures and haul distance for gravel but also to the road's location and proximity to other roads in the area.

Presently six to eight days are allocated for each field trip by Planning Unit engineers for on-site inspection of up to 300 kilometers of proposed roads under consideration. The NOW are confident that this provides sufficient time. It is recognised that six to eight days is an average figure, and additional time is allocated if found necessary. Nevertheless the donors encourage the NOW to review the timing requirements of these trips frequently to ensure that this important part of programme implementation is being given sufficient priority.

The donors note that it would not be feasible for a DDC to select approximately 600 kilometers of roads in a District in a short time period. Therefore, a DDC first looks at the needs of an area which has "high economic potential". It is recommended that efforts should be made to identify roads in all divisions of each District by March 1979, so that there is an equitable distribution of roads in all areas of the District.

The donors wish to see more consideration given during the selection of RARs to the complementary investment activities, such as the provision of agricultural extension services and other rural works programmes, which need to be undertaken to maximise the impact of the roads and ensure the achievement of projected economic change. Such complementary activities will be discussed further in another section of this report.

The donors discussed the usefulness of the pre-investment evaluations reports. They accepted that the information contained in these reports will form the basis for assessments made in the Impact Study, and is therefore of value.

The donors discussed the question of whether the utilisation of cost-benefit analysis as one part of the criteria for roads selection would still allow construction of RARs in all the Districts originally included in the programme. It seems clear that the development needs of the areas where the RARP is being implemented are large enough that it is unlikely that an area will be eliminated on the basis of economic criteria before 1980. It is anticipated that the Impact Study, discussed in Section 9, will provide pertinent feedback both on the appropriateness and adequacy of the selection and evaluation criteria and on the inter-relationship of the RARP with other development activities being undertaken in the same District.¹

5. Staffing

In general the field staffing situation of the RARP is satisfactory. There are presently sufficient engineers to run the field units and the staff training department is meeting the demands laid upon it. The staffing situation at headquarters however does give cause for serious concern. It is worthwhile discussing the future staffing situation in relation to the fact

¹ It should be noted that the UK and USAID intend to carry out their own evaluation of the roads which it is proposed should be constructed by the Units they are financing.

that whilst only 8 units are presently considered operational it is planned to have 36 units operational by the end of the year. This rapid growth rate will put a great strain on the RARP and, in particular, on the staff of the Programme.

The various aspects of staffing are discussed below:

Headquarters Staff

The Special Projects Branch of the Ministry of Works is responsible for the implementation of both the RARP and the Graveling Programme. A Chief Superintending Engineer is in charge of the Special Projects Branch. Under him are two Senior Superintending Engineers who are responsible for the RARP and Graveling Programme respectively. Special Projects Branch also has an Administrative Services section which serves both the RARP and Graveling Programme. It should be recognized that, to date, this section has been concerned mainly with the RARP.

The Senior Superintending Engineer in charge of the RARP has, in theory, two Superintending Engineers responsible to him. One deals with construction, the other with planning and records.

There is presently some doubt whether the present incumbent of the Chief Superintending Engineer's post, Mr. P. Denis, will be staying with the Ministry of Works. This naturally gives cause for concern for if a change is made at this vital period of growth of the Programme the planned increase may not materialise.

The Senior Superintending Engineer responsible for the RARP is a UNDP-financed, ILO Expert, Mr. Simpson. Finance for his post is assured from UNDP until the end of 1979. It is likely that UNDP will be prepared to finance his post beyond that date. The post of Superintending Engineer (Construction) has never been filled. UNDP are prepared to finance this post and finance is available under the UNDP/ILO project. It is vital that this post is filled at the earliest opportunity.

The post of Superintending Engineer (Planning and Records) is also presently vacant. Mr. K. Butcher, an ILO expert financed by UNDP has been advising MOW on systems and procedures. He will leave the Programme in May of this year and it is envisaged that a Kenyan engineer, presently working on the Programme, will take up the post of Superintending Engineer. Nevertheless it will take time for him to adjust to his new post. To ensure that, during this time of change of personnel at the RARP headquarters, there is no reduction in efficiency the ILO has agreed to provide two Associate Experts at Headquarters. One is already working at the Programme headquarters, the other is expected at the beginning of June.

The Ministry of Works have stated that, as long as the Construction Engineer's post is filled soon, the staff level at headquarters will be sufficient to cope with the rapid expansion during this year.

Field Engineers

Of the 14 field engineers posts required for the Programme when it is fully operational, 12 are presently filled. Four of the posts are presently filled by expatriate engineers who will be leaving in the near future. It is understood that replacements have already been found for them. There are presently 5 Kenyan engineers running units of the RARP. One of these is expected to come to RARP Headquarters as mentioned above. It is also likely that two more will leave the Programme.

Donors have found difficulty in the past in finding the number of engineers to which they are committed to provide. One solution, proposed by the Dutch Government, is to allow the selection of engineers who are not nationals of the donor country. They have also requested the ILO to advise them of suitable candidates.

Kenyanisation

Whilst the Programme is presently predominantly expatriate in terms of engineers it is not considered that this is a problem peculiar to the RARP. The supply of Kenyan engineers to the MOW from the universities is not high and it would be unreasonable to expect that the RARP should obtain preferential treatment.

The MOW has a 3-year training programme for graduate engineers. MOW have stated that it will still be their policy for these graduate engineers to spend part of this training period with the RARP. The donors would like an indication of how many Kenyan engineers it is expected to put through the Programme in this way in the next 18 months.

The donors suggest that it would be useful to give under-graduate engineers an understanding of labour-intensive methods and in particular the RARP. This would help to eradicate any in-built bias against working with a labour-intensive programme. Discussions with the relevant authorities in the universities should be set in motion to ascertain the modalities of introducing this element into under-graduate courses. The donors request that the results of such discussions be reported back to them.

OICs and Overseers

The only problem envisaged in this respect is in the supply to the Staff Training Department of trainees. With the proposed increase of units it is however likely that only 3 Overseers per unit rather than 4 will be available for the 36 units envisaged by the end of 1978.

The supply of trainee OICs is perhaps more of a problem than that of the supply of trainee Overseers. Furthermore it is hoped that the problems of promotion of OICs can be resolved quickly.

Efforts are being made to look more closely at the potential supply of Overseer and OIC trainees. This includes Overseers from the maintenance branch, school leavers and, in the case of OICs, trainees at the Kenya Polytechnic.

The MOW have stated that the staffing organisation presently proposed for the Programme should be able to deal with the rapid growth of the Programme. The donors however have serious reservations that, with the possible turnover and change of staff at Headquarters, the management will be severely strained. Neither of the two Superintending Engineer's post are presently filled, the systems and procedures adviser is leaving in May, the Technology Unit personnel will be leaving shortly afterwards and thus, in the next 6 months, there will be a net reduction in headquarters staff. In the short term the donors feel that the issue of headquarters staff could be crucial to the development of the Programme. The MOW have stated that the present level of staff at Headquarters will be adequate, as long as the Construction Engineer's post is filled. The donors, however, wish to be informed by 1 July if the situation deteriorates and extra personnel considered necessary. They also wish to be informed in the quarterly progress report of the output of OICs and Overseers from the Staff Training Department.

It was suggested that with the problems of procurement of tools it would be useful to have one engineer at headquarters totally concerned with this problem. However, it is accepted that, if the present problem is resolved then there may be no need for this post.

It is understood that there may be a reduction in staff in the Planning Unit in the early part of next year and this, of course, would put a severe strain on the Unit. The donors wish to be informed if the MOW require assistance in this area.

6. Development Activities Complementary to the RARP

For the RARP to achieve the optimum results of the investments made it is vital that all levels of Government actively participate in the complementary rural development activities. The donors feel that it would be possible for the RARP to stimulate, both within the Ministry of Works and to the extent possible, other central Government agencies, and the provincial and district authorities, activities and investments complementary to the rural roads constructed under its programme.

Attention should continue to be paid to the state of maintenance of the road system to which the rural access roads are or will be connected. It is also recommended that the MOW, via the RARP, could make known to other central Government agencies and the Government provincial agencies, where and when rural access roads will be constructed, and what complementary action, as suggested in the first instance by the DDC, is considered instrumental for the over-all success of the programme and for efficient rural development in the areas covered. The DDCs should, if necessary, be stimulated to formulate plans for activities and investments to be undertaken in the areas where they themselves have proposed rural access roads to be constructed. By such a decentralised concentration of activities it is hoped that development efforts may be more efficient in stimulating the growth of welfare in the rural areas of Kenya.

Donors realize that it may be hard for regional authorities to give attention exclusively to one sub-division only, concentrating both road construction and complementary activities in this sub-division alone; they hope and expect, however, that the DDCs in particular, will strike a balance between growth and distribution of welfare, the more so as the RARP will continue in the years to come and an appropriate phasing of the development efforts seems to be a possible solution to this problem.

7. Planning and Reporting

Adequate planning and reporting is essential to effective work management and financial control. However, planning and reporting systems for the Rural Access Roads Programme should be kept as simple as possible to avoid overburdening management and to permit the delegation of basic work scheduling and control procedures to the lowest unit.

Work Planning, Reporting and Control

The Technology Unit has developed a comprehensive system for planning and reporting from the site level. ("Project Planning and Reporting for Site to Engineer - Alternative I", October 1977). This system encompasses procedures for the selection of alignment and for simple survey to establish work quantities to which are then applied standard taskwork norms to establish resources requirements and work schedules. Standard forms are then used to record progress on a daily, weekly, monthly basis from overseer to OIC to Engineer respectively which permit timely control of the progress of work. It is the understanding of the donors that this system has been successfully tested and established in Kwale and Kitui districts, and is incorporated in the Overseer and OIC training courses by the Staff Training Department (STD). However, the planning system has not been extended to all units as expeditiously as possible. In the interim the simplified version (Ibid. - Alternative II) which dispenses with the need for survey technicians may be used where current staff limitation necessitate. Every effort should be made to implement the preferred system (Alternative I) for all units to the extent possible.

8. Reports to Donors

The MOW has suggested that it will prepare a joint Quarterly Progress Report for all donors (Attachment 1) with a separate annex as may be required by individual donors with respect to the particular units being financed. Recognising the need to limit the reporting burden of the MOW, the donors accept the proposal of the MOW with the proviso that it should include (i) a rolling one-year advance plan of critical steps, staffing, resource requirements, etc. (as suggested in Section 1); (ii) a brief report on progress of (a) pre-investment evaluation and project selection and (b) impact studies; (iii) a report on the output of the Staff Training Department. It is the donors view that these reports should be sent to them not more than 45 days after the end of the reporting period to which the report refers.

The donors also request that each donor receive copies of the various technical reports of the Technology Unit including the reports on hand tools and equipment, labour supply and the forthcoming Technical or Operations Manual.

9. The Impact Study

The donors note with concern the long delays over implementation of the Impact Study. Given that USAID have still to make modifications to the study, which will probably be done by April/May, the first farm surveys are unlikely to begin before the end of May/beginning June, and not in mid-March/April as presently scheduled. The donors urge that the study begin as soon as possible, and certainly no later than June. Financing for the remaining US\$ 200-250 thousand should be obtained, either from local or external sources, as soon as possible, and a definite commitment should have been obtained from some source by no later than the next review meeting.

Greater efforts should be made to obtain a development economist to head the Impact Study. It is necessary to immediately establish whether SIDA is willing to provide the development economist. The donors suggest that the RARP approach such donors as the World Bank, who might be interested in providing such assistance.

The donors suggest that greater emphasis be given to complementary investment in the areas surveyed. This type of information could probably be obtained through the community survey.

10. Disbursement Procedures

The donors have accepted the proposal¹ put forward by the MOW for disbursement on a monthly basis except for USAID, who already have an agreed disbursement system with the MOW, the EEC and the World Bank who need to receive clearance from their respective headquarters. The EEC and the World Bank will inform the MOW of the acceptability of the proposed disbursement procedure as soon as possible.

The World Bank would like to review the RARP auditing system but is not able to provide auditing services as requested by the RARP management.

11. Design and Construction Standards

Introduction

In the "Revised loan application, July 1975",² general design and construction standards were outlined. After several years of RARP activities it can be seen that a variety of standards have been used (see Appendix 8). At the same time the technology unit has, on the roads under construction or completed, carried out experiments, performed work studies and gathered useful information from individual engineers in order to devise uniform and effective

¹ See Section 10, Part I of this report.

² DR.011.

standards and work methods which could be introduced throughout the programme.

It is clear that no road construction programme can be executed smoothly unless uniform design and construction standards are introduced:

- to guide supervisory staff (field engineers, officers i/c, overseers) in their daily work;
- to provide Staff Training Department with a base on which the training can be built up;
- to allow the RARP H.Q. to effectively monitor the construction aspects of the programme.

Owing to its size and special requirements, a very elaborate organisation had to be established within the NOW to carry out the RARP. In contrast to this one particular point should be stressed:

The technology used on the level of actual road construction should enable a trained RAR supervisor to have a comprehensive understanding of all stages of construction. Given the chance and some experience he should be capable of building a road entirely by himself. The RARP has therefore an excellent chance to promote appropriate technology at the grass-root levels.

Standards and Work Methods

The construction standards of RARs so far constructed are very good and appropriate. The proposed design standards (see Appendix 8, Characteristics of RARs, table 2) are accepted and endorsed by all donors.

The work methods proposed to the Technology Unit should also be standardised for the whole Programme. These steps are considered to be an important precondition for setting up a uniform planning and reporting system covering all levels of implementation.

Implementation

During the next few months most of the RAR field engineers who have worked with the Programme from its initial stages will be replaced and the total number will be enlarged. Furthermore, considering that the RARP has now been operational for 3.1/2 years and that the work of the TU is coming to an end it now seems to be the right time to introduce and standardise the design standards and work methods, as devised by the TU and TRRL, throughout the RARP.

It is understood that the standards can still be modified in the light of new knowledge arising out of the practical work or out of the results of ongoing research programmes by TRRL.

It would be advisable for new field engineers to be made totally familiar with the design standards and construction methods of the programme as well as the administrative aspects.

Gravelling

The present MOW policy is to gravel all roads. Generally the donors agree that RARs should be gravelled where required to bring them to an all-weather standard. Explicit criteria should however be introduced to determine the necessity of gravelling roads.

The TRRL is presently conducting a research programme to establish gravelling guidelines for the RARP. In the meantime the donors suggest that the following points should be taken into consideration in order to decide whether gravelling is appropriate or not:

- economic hauling distance from the quarry to the road
- suitability of in-situ material
- standard of classified road linking the RAR
- transport demand concentrating over a short time of the year only (harvesting season).
- the disruption to anticipated traffic if gravelling is not done.

In cases where gravelling is necessary for technical reasons but is found to be uneconomical, that particular road should be dropped from the programme.

The donors also suggest that every effort is made to co-ordinate the activities of the RARP with those of the regravelling programme which was recently introduced by MOW in some districts to improve the classified road network.