

LESSONS FROM THE SPECIAL
RURAL DEVELOPMENT PROGRAMME:
A SUMMARY

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This document draws upon the Institute for Development Studies' evaluation of the SRDP as well as other selected analyses. It is intended as a summary for discussion within Government of issues emerging from the SRDP which relate to rural development.

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RURAL DEVELOPMENT PROGRAMME:
A SUMMARY

1. The discussion below is designed to draw from the recently completed IDS evaluation of the SRDP (as well as from selected other analyses) the most significant lessons learned from the SRDP experience. The recommendations made are presented in abbreviated form without, in most cases, presenting the analysis upon which they are based. With regard to selected issues some analysis is given in the appendices attached; with regard to others it is necessary to refer to the original reports, the major one being the IDS evaluation. The intent of this brief is to list those aspects of the SRDP experience which appear to have applicability to future rural development efforts in Kenya, and to form the basis for discussion within Government.

2. Though it is not necessary to detail the history and objectives of the SRDP here, it should be recalled that the SRDP was intended as an experimental programme to help evolve an effective strategy for bringing about rural development in Kenya. In pursuit of this goal six areas were chosen to represent different yet typical human and environmental characteristics of Kenya. The areas were South Kwale District at the Coast, North Tetu in Nyeri District, Mbere in Embu District, Vihiga in Kakamega District, Kapenguria in West Pokot District and Migori/Kihancha in South Nyanza. A series of pilot projects was selected to comprise an integrated experimental programme which would be subjected to research and evaluation to ascertain its replicability in other parts of the country. The overall objective was to raise the productivity, income, and the level of welfare of the rural population. The SRDP commenced in 1971 and the last of its activities will be concluded/taken over as ongoing activities of operating ministries in mid - 1977.

3. The activities which have provided the most useful lessons include development administration, crop experimentation, group extension methods, extension of unsecured credit to small farmers, beef production as it relates to the stockroute system, labour intensive road construction, the women's programme, and functional literacy. In addition, valuable insights have been gained through monitoring the rural industrial development activity of the RIDP and the livestock (dairy) development programme. Each of the above is considered in turn.

4. Development Administration - One important aspect of the SRDP was the testing of a system of development administration that might have replicability to district development. Four features of the system emerged as particularly significant: the Rural Management System, the designation of Area Coordinators for each SRDP, Project Committees for project planning and implementation on the local level, and a linkman system with the central Ministries in Nairobi.

- A. The revised Rural Management System proved to be a useful project monitoring tool, parts of which can be replicated in district development planning. Its deficiencies were a) it added unnecessary formalism to a project planning and implementation process which, by its nature, must be able to adapt to different local situations, and b) it was not an effective system of project evaluation (as opposed to monitoring project progress) or project planning in that the information necessary for these activities was not gathered and utilized through the system. Approaches for alleviating these problems have been proposed and revolve around developing a local level project planning and evaluation system. They are presently being tested in Murang'a.
- B. The system of designating Area Coordinators for the SRDP's improved local level project implementation, but because these officers had no fiscal control their effectiveness was limited by their management skills and their abilities to work with officers of the operating ministries (their abilities to affect some coordination of diverse programmes of different ministries). Though this problem has been alleviated to some extent in the case of DDO's by the institution of the Rural Development Fund, bottlenecks are still occurring because of limited local fiscal control.
- C. Project committees which were able to accomplish substantive project planning and monitoring were those which achieved maximum involvement of local staff and local residents in project decision - making. This experience points to the need to find means to achieve local participation in district planning. The re-constituted District Development Committees have a potential for better filling this role than was previously the case (in that a wider spectrum of local leadership is now represented), but in many instances they exhibit some of the weaknesses of the Project Committees - they become forums for information dissemination concerning projects, failing to perform a substantive planning and monitoring role and they are not an effective vehicle for representing the views and participation of local residents who are ultimately affected by the projects.
- D. The need for coordination / communication between the field and Nairobi and between ministries in Nairobi was addressed in the SRDP through the linkman system. That need is magnified in district development activity. An attempt to strengthen the system has been made by appointing high level ministry officers as linkmen. Follow-up needs to be done to see that these officials designate appropriate officers to be in charge of specific activities and that effective communication links are developed. Where this is not achieved modifications to the system must be made.

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5. Agriculture - In the agricultural field there were more than forty crop development projects of various types, covering crop production, credit schemes for particular crops, and crop extension. In addition, a limited number of projects in livestock development were implemented.

- A. Several cases of rapid adoption of crops can be cited in the SPDP areas, e.g., hybrid maize in Migori, Tetu and Kapenguria, soya beans in Migori, sunflower in Kapenguria and Mexican beans in Mberu. In each instance a combination of factors were present which help explain the high adoption rates: effective extension (see comments in B below), adequate provision of inputs, reliable marketing arrangements, favourable prices, and a high level of participation by farmers with government staff in project planning and implementation. In each instance credit was a weak explanatory variable for the high rates (see (c) below). It is essential that each of these variables be taken into account in planning future crop development projects (e.g. IADP projects); such has not necessarily been the case in the past.
- B. Methods were developed of effectively organizing and implementing agricultural extension services aimed at reaching large numbers of smallholders. Specifically, insights were gained with regard to:
- (a) How to maximize the diffusion of agricultural innovations to smallholders. The most positive results were obtained through focusing extension activities on average farmers (as opposed to the most or least progressive). The most effective method to insure that average farmers were reached was to concentrate extension activities on area based groups of farmers, i.e., farmers with adjacent farms grouped for purposes of extension (this approach is based on the fact that more and less progressive farmers are distributed rather normally over a given geographical area).
 - (b) How a larger number of smallholders can be reached without increasing costs of extension activity. An effective approach to group extension has been developed in South Nyanza where farmers organize groups among themselves (through Agricultural Village Committees) and choose group leaders who become the primary contact points with extension staff. Per farmer extension costs have been reduced markedly from those incurred when farmers are contacted individually, adoption rates have improved, and the system has proved effective for mobilizing the farmers' own initiative for extension activities.

- (c) How the working performance of the extension staff can be improved. A combination of two systems were tested and found effective: day to day management of extension activities were greatly improved through the Agricultural Extension Staff Management System developed in Mberu which consisted of a reporting system for lower extension staff and locational monthly management meetings. The introduction of new extension projects or changes in extension strategies are being effectively done in South Nyanza through staff inservice training.

C. The appropriate place of credit in smallholder development.¹ The primary lessons learned include:

- (a) Smallholder credit schemes tend to have exceedingly high cost/benefit ratios. As a factor to stimulate the production of a variety of crops credit is often not needed, administrative costs are high, and frequently the intended beneficiaries are not reached. Smallholder credit should be promoted only for those crops and in those areas where a need can be shown.
- (b) Where it can be shown that such improved inputs as synthetic fertilizer are necessary and credit needed for their purchase, recommended amounts should be those that are economically (as opposed to agronomically) optimal.
- (c) Improving husbandry practices and encouraging the application of such non-purchased inputs as compost and animal manure through extension efforts should be regarded as the major vehicle for increasing production of smallholders (rather than through credit).

Each of these issues has direct applicability to district planning and to the design of IADP projects.

D. Projects aimed at promoting the adoption and improved husbandry of dairy cattle have not been, by and large, specific to the SRDP areas and so can not be defined strictly as special, experimental activities. Nevertheless, several of the projects - specifically those associated with smallholders - were closely monitored/analyzed under the SRDP, and as a result some general lessons can be drawn which have implications for livestock development strategy in Kenya.

- (a) There are, in livestock (dairy) development, certain "indivisibilities" centered on the cattle disease problem. This is associated with the fact that grade cattle are highly sensitive to tick-horn diseases. As a result, the efforts of "progressive"

small farmers to maintain grade cattle often turn out to be a costly failure, due to the spread of disease from surrounding plots. At the same time farmers owning Zebu cattle and without the same investment have little incentive to support cleansing ordinances, if they exist, or to dip conscientiously. Only if a large proportion of farmers in the area have a private interest in improved cattle and disease control will the social interest be pursued. Thus a comprehensive or "frontal" assault on livestock development consisting of a variety of activities - investment in comprehensive disease control, possibly loans to farmers and/or artificial insemination for livestock improvement, and improving marketing facilities in a particular area (much as was done in Tetu) - appears to be much more effective than piecemeal attempts at partial disease control or the encouraging of grade cattle acquisition without first adequately addressing the disease problem.

- (b) To accomplish the above grade cattle development needs to be based on a strategy for consolidating and extending existing 'clean' (disease-free) and 'semi-clean' areas. This indicates priority areas for major efforts: Bungoma, Kakamega, Mandi and Kericho in the West (with southern parts of Elgeyo Marakwet and Baringo), and Meru, Embu and part of Machakos in Central Kenya.
- (c) The maintenance of cattle dips in the country as a whole is seriously inadequate. Because of external diseconomies from non-dipping (social benefits from dipping), we recommend as a radical proposal free dipping, if not in all Kenya then in strategic development areas as the basis for a comprehensive approach to the disease control/dairy development problem. This would be for a minimum transitional period of, say, three years. Testing and maintaining the strength of acaricides should be taken over by the Veterinary Department. Costs should be financed from taxation (perhaps on cattle sales) as with other public goods, such as roads, yielding social benefits.

E. Beef production and the stockroute system. A major development effort is underway in Kenya to provide marketing facilities for livestock, particularly from the more remote range areas where the potential for commercial production is thought to be high but constrained by the lack of marketing channels and facilities. The present approach is for the movement and marketing of livestock to be accomplished through a chain of stockroutes and holding grounds provided with adequate grazing, watering, and disease control facilities. Stockroutes were established in two of the SRDF areas, Kipenguria and Migori, and though a comprehensive strategy did not emerge from this experience enough was learned to allow proposals to be made for major modifications in the present system related to disease and land rights issues. These proposals are summarized below.

- (a) It is essential that in the process of establishing holding grounds for cattle and other links in a stockroute chain the issue of land rights be considered sacrosanct. The logic of a stockroute requires that these land units be as free as possible from trespass, grass poaching and stock theft, all presently serious problems. Resolution of land rights is particularly difficult in areas where land is communally held. It is essential that the problem of recompense to the existing users of the land should not be ignored, but that the provision of some service that would be particularly desirable and accessible to those users would be a way of solving the distributional problem and minimising conflict.
- (b) One of the most serious problems in moving cattle from the pastoral areas is the transmission of disease, and the consequent issue of how to minimize this transmission while inhibiting as little as possible the efficiency of the marketing system for cattle. The current emphasis on quarantining cattle in a final holding ground should be replaced by an emphasis on radially improved reporting of disease in the whole area from which the cattle are funnelled. Markedly liberalised movement along the stockroutes when quarantine restrictions are not necessary should be combined with far greater efforts to clamp down on stock movements when quarantines are warranted and such movements would involve unacceptable levels of risk. If movement along the officially recognised routes were liberalised, an additional advantage would be relative ease with which disease problems could be monitored, with a minimum of policing.
- (c) In the case of contagious Bovine Pleuropneumonia (one of the serious and easily transmitted cattle diseases) presently a three month quarantine period is imposed while the cattle are tested and vaccinated. However, if there had been an outbreak of the disease in the area served by the stockroute, this would not be long enough to ensure that the disease was not transmitted through the supposed barrier. If the area from which the cattle are drawn is known not to have had an outbreak for years (as is the case for the Rift Valley Province), a three-month delay at an arbitrary point for quarantine reasons encourages traders to bypass the system and is very hard to justify. Once again this approach should be replaced by improvements in the disease reporting system and by an ability to impose the necessary quarantines and cattle movement restrictions, along with the other CBPP control measures, should any outbreak occur. (We emphasise the word "necessary"; an outbreak in Pantera does not make it necessary to impose quarantine restrictions in Karapokot, merely because both are in the "Northern Frontier".)

6. Labour Intensive Road Construction - Experience gained in the SRDP is already making a significant contribution to the Ministry of Works' rural access road programme. The principle recommendations for this programme are :

- A. Sequential Phasing - New access roads should be built in phases, the first phase consisting of relatively low cost clearing and shaping (the minimum investment needed for all weather passage), a second phase consisting of improving the quality, etc. The rate of improvements should be determined by direct observation of road use (benefits accruing from the roads). Large volumes of traffic for productive purposes justify priority being given for road improvement.
- B. Maintenance - Labour intensive maintenance should be planned as an integral and permanent feature of the road network created under the rural access roads programme. Once the supervisory structure is created and local labour has some experience in road building, a capability for road maintenance on a decentralized labour intensive basis is also established.
- C. Planning/Siting - Local involvement in the siting of road segments can have a powerful motivating force both in the success of the roads programme and in other complementary development efforts.
- D. Wages - Optimally wages should be paid at a level barely sufficient to recruit the needed number of workers from agricultural pursuits during the slack seasons. If higher wages are paid, special efforts must be made to avoid the drain of labour away from agriculture at peak planting and harvest times. In addition, decisions on the extent to which labour - intensive projects should be pursued should be made using the lower prevailing agricultural wage as a 'shadow' price.
- E. Supervision - Adequate leadership and supervision for the construction of rural access roads can be recruited and trained from the Roads Inspectorate of Ministry of Works (for directing a local level programme) and from local talent (for headmen). Training should centre on management and human relations in the case of the Roads Inspectorate.
- F. Budgeting - The need for considerable local flexibility dictates fiscal management at the district level.

7. Rural Industry -- Though it was not included as a specific SRDP activity, monitoring and evaluation was carried out on the Rural Industrial Development Programme (RIDP), one of two primary vehicles used for the promotion of small scale industry in Kenya (the second is the industrial estates programme under Kenya Industrial Estates, Ltd.). The strategy of the RIDP has been to establish local centres, comprised of relatively expensive buildings and central workshops, to act as "bases" for extension efforts to local scattered artisans. This extension programme has, however, proved to have only minimal impact and to be excessively costly. At the same time the Centres themselves have not been geared to servicing many clients on their premises or functioning adequately as industrial estates. What is called for is an intermediate solution between the estate approach and the extension approach. This would provide very simple workshops at central sites for large numbers of artisans who would have use of specialized machinery and equipment as common facilities. These would in effect be "workshop clusters" rather than industrial estates. Specific recommendations include:

- A. Policies related to rural industrial development need to make a clear distinction between moderate-sized industries and craft industries, and to recognize that a substantial part of rural industry promotional activities in the near future will be directed towards craft industries (the primary focus of the RIDP has been toward these industries). The appropriate forms for promotion of craft and of moderate-sized industries are different.
- B. Up to now the K.I.E. and the R.I.D.P. have been inclined to different approaches, the K.I.E. towards more heavily-capitalized centres with client assistance the centre somewhat along the lines of industrial estates, and the R.I.D.P. towards an extension approach with assistance at the clients' own premises. A primary problem with the extension approach to clients has been the fact that it has not been able to address a central constraint faced by small producers: the lack of capital in the form of premises, power, tools, and materials. Total reliance should not be made on this approach in the future.
- C. The alternative form for craft industry development of workshop clusters appears to have significant advantages over the estate and extension approaches. Specifically, it is proposed that:
 - (a) Existing Centres in townships would be transformed by building thirty to forty cheap shops or workshop units around the existing buildings.
 - (b) In smaller rural centers, smaller clusters of five to ten units would be built around a generator and some common facilities. The cost of such units should be such that artisan tenants could afford to pay rent which would cover the full depreciation of the building.
- D. This approach should serve as a model for the large number of RIDC's proposed for construction in the current development plan.

8. Women's Programme - In the SRDP the Women's Programme has consisted of strengthening women's groups by training leaders in a variety of fields related to family welfare and community development. The programme is essentially an exercise in extension in that it draws upon the field staff of a number of operating ministries to coordinate the work. As a result of this need for inter-ministry coordination the programme has provided an ideal opportunity for developing approaches to integrated development activities. Some projects encouraged have been income-generating, such as poultry keeping and handicrafts, and others have been primarily in the field of welfare, such as malnutrition and the establishment of subsistence vegetable gardens.

Far and away the most significant contribution of this work has been the evolution in the SRDP's of a local level planning system for women's groups activities. To date it has been implemented in fourteen districts and has implications for district level planning throughout the country. The objective of the system is to develop project planning and implementing procedures which (a) effectively co-ordinate the efforts of the various ministries involved and (b) gather sufficient local level data for effective planning and involve local level staff, leaders, and residents in the process of project planning and implementation. The system has been broken into seven 'tasks' as follows:

- A. Setting up District Planning and Implementation Teams (DPIT) - these teams are organized at district workshops and are composed primarily of district level staff who are involved in the women's groups activities. The coordinators of the teams vary by district, and the team is the primary project planning and implementing body.
- B. Community Seminars - a series of seminars are held with local residents to develop a dialogue concerning the concept of the programme and to draw ideas on potential programme activities and how they might best be run.
- C. Collection of Information from Women's Groups - data for project identification and planning are identified and collected through the guidance of the DPIT. Monitoring data are gathered as the projects are implemented.
- D. Selection of Projects - based upon information gathered through task B and C above, project selection is undertaken by the DPIT.
- E. Project Planning - detailed project design is then done, also by the DPIT.
- F. Training and Extension Education - a system has been developed to train extension staff who will be responsible for the extension work and to train women's group leaders. The training is carried in formal sessions at training centres and informally in the field.

G. Implementation and Evaluation of Field Activities - this work is co-ordinated by the DPIT.

The value of the system is that it is building on the initial efforts at district planning to develop the machinery necessary to deal with all aspects of project design and implementation at that level.

9. Functional Literacy

While the results from the functional literacy programme in the SRDP were disappointing, i.e., generally high drop out rates and few trained, the experience provided a wealth of information concerning how the programme might be structured to better achieve its objectives.³ The experience did, in fact, result in comprehensive proposals for revising the course. What will be required are fundamental changes in three areas: teaching methods, course content, and programme administration. Several of the most important concerns are summarized below (a number of these are technical recommendations which require evaluation (and, in fact, have been evaluated) by persons qualified in functional literacy training methods. They form the basis for improving the programme

- A.. The teaching method being used at present places too much emphasis on the whole-word approach. Advantage should be taken of the phonetic nature of the Swahili language by introducing students to the sounds of individual vowels and consonants early in the learning sequence, so that after a limited number of lessons they can construct new words on their own and are no longer dependent on learning, by rote memorisation.
- B. The order in which words are introduced should be planned carefully. Words made up of simple syllables should be introduced before more complex words, and the syllables and sounds should be introduced systematically and with adequate repetition.
- C.. Better advantage should be taken of the pupils' previous familiarity with Swahili by introducing simple, commonly used words in the introductory lessons and only later adding difficult, little known words.

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The recommendations of the SRDP analysis are based on the assumption that expenditures on functional literacy, relative to other programmes, are justified. This assumption has been questioned by others. The recommendations here focus on ways to make the programme more cost-effective.

4. Words with more than one meaning should first be introduced with their common everyday meaning, and other less widely known meanings introduced later.
5. The reasoning behind common farming practices in Kenya should be carefully investigated, and different practices should only be recommended in the functional literacy readers if it is quite certain that these practises would in fact represent an improvement.
6. Following these recommendations, the booklets for the Functional Literacy Programme should be rewritten and the teaching methods revised. The writing should be done by a team consisting of, at minimum, a literacy expert, a Swahili specialist and people with extensive fieldwork experience in agriculture and domestic science education. The first two booklets should be concerned mainly with teaching reading and writing, and the adult education component should largely be reserved for subsequent booklets. Separate editions of the later booklets would need to be prepared suited to local conditions of climate and soil and local economic factors. Local field staff should be fully involved in writing these editions.

SMALLHOLDER CREDIT - SRDP EXPERIENCE

The discussion below centres around the recommendations of the IDS with regard to smallholder credit and is based largely on an analysis of the Vihiga maize credit scheme. Alternative recommendations for Government policy (considered to be second-best by the IDS) are discussed in Appendix II.

1. The IDS analysis argues for increasing smallholder production other than through the provision of credit. They specifically recommend that smallholder credit schemes, when they are financing a crop for which there is no monopoly buyer, e.g., most food crops, be dropped in favour of other methods. This conclusion is based upon the following:

- the benefits accruing from Vihiga have been few. While the rate of adoption of hybrid maize and chemical fertilizer among Vihiga farmers has been impressive, little of it can be attributed to the credit programme. Such a conclusion results from the fact that a) the distribution of the loan was such that an exceedingly high percentage of the recipients had already adopted the improved inputs (in 1973 93% of the loanees had provided the initial demonstration prior to receiving the loan (in that they had already used the inputs).
- there is a general tendency in such smallholder credit schemes toward low benefits. As a factor necessary to stimulate the production of a variety of crops among smallholders, credit is often exaggerated, i.e., many farmers do not need credit in order to improve crop yields and to emphasize it more often than not diverts attention from those problems that are truly important.¹

Even if a smallholder does not have the resources to purchase a recommended package of improved inputs, it is not always as necessary as assumed for farmers to start off by using large amounts of, for instance, chemical fertilizer (for many crops the most expensive of the improved inputs). There is considerable evidence that substantial yield increases can be obtained through improved husbandry practices as well as with the application of compost and animal manure. In addition, problems of soil depletion can be partly solved by the use of locally available fertilizers, interplanting, and crop rotation; at the least, the necessary quantities of synthetic fertilizer are likely far below what is usually recommended. Problems of proper husbandry and the optimal use of compost and manure are usually far greater than the need for credit to purchase expensive manufactured inputs.

A second factor limiting benefits is that credit often does not reach those who need it the most (again, this is well

¹That this is the case in Vihiga is well documented. See Vihiga Discussion Papers 1 - 5.

documented in the Vihiga case). AFC, and most lending institutions, are not interested in the high risk smallholder (and so tend to focus on the larger, lower risk farmers) and extension agents often do the same; this happened in both Vihiga and Tetu.

- the costs in Vihiga have been high. A subsidized interest rate plus a very low repayment rate have resulted in a benefit/cost ratio so low as to make the scheme not viable.
- there is a general tendency toward high costs. First, it is inevitably expensive to service large numbers of small loans, and so administrative costs are high. Second, for many farmers the surplus produced over family consumption needs (in the case of maize) will be insufficient to repay the loan, thus adding to the rate of default. Third, it is claimed that there is a tendency in unsecured loans toward low repayment, largely because the incentive to repay of establishing a good credit record so as to have available future credit is insufficient among many farmers - likely many farmers do not foresee the need for credit in the future. Likewise, smallholder schemes that require title deeds as security for loans may experience high default rates as well; the cost of foreclosing on significant numbers of loans will be too great for the lending institution to bear, thus forcing them to rely on voluntary compliance with repayment requirements (as in the case of unsecured loans). The issue of the influence of loan security is discussed further in Appendix II.

In sum, the report recommends that, because of the low benefit/cost ratio, there is not justification for continuing the Vihiga credit programme and one must be generally wary of promoting similar schemes in the future.

2. As alternatives to credit the report emphasizes a) considerably improved extension services and b) subsidization of improved farm inputs (where need for such inputs is established). Specifically, it suggests that the extension service should be regarded as the major vehicle for increasing production and raising income levels of smallholders. This recommendation is based on the fact that a) production levels can be raised by improving farming methods that do not involve the introduction of expensive inputs, b) the repayment problem has been the most severe among the poorest farmers receiving loans in Vihiga; where the credit programme is successful in reaching lower income farmers the repayment problem is likely to become more severe, a situation that reinforces the argument that effective extension work is particularly important where the aim is to benefit the most disadvantaged, and c) there is considerable room for improving the effectiveness of the extension service in reaching farmers of average and below average income. The recommendations for improved extension revolve around the group approach to extension, an approach which, though not new, is given considerable weight by IDS.

3. The analysis further suggests that, where the need for them is established, improved seeds and synthetic fertilizers should be distributed to smallholders at subsidized prices. The primary advantage of this approach is that, like effective extension, subsidies can reach the smallest farmers (many of whom likely would not qualify for smallholder loans). The major objection is that the cost could be substantial, though, depending

upon the extent of the subsidy, it could be far less than the cost of a nation-wide smallholder credit scheme (because of the possible high rate of default).

4. A strong argument is made for a moratorium to be declared on the encouragement of synthetic fertilizer use by smallholders, pending the outcome of research establishing the areas where it is necessary and volumes that are economically optimal. The purpose of this recommendation is not to suggest that synthetic fertilizer has no value but to switch the burden of proof. Instead of assuming that it is vital and must be used unless it can be shown that it is not necessary, it should be assumed that good husbandry, including rotation of crops and use of compost and manure, are sufficient to maintain good yields unless it can be shown that they are not.

This recommendation is based on a) the fact that while synthetic fertilizer may not always be as expensive as it is now, its prices is likely to remain high, b) the field trials quoted in the report cast doubt on its effectiveness relative to good husbandry practices, c) that crop rotation, composting and manure are good substitutes, d) that, notwithstanding the first three points, in some areas farmers may not be able to obtain good yields from improved seed without synthetic fertilizer and e) that if it is necessary the amounts needed may not be as large as those currently recommended.

5. It is further recommended that the necessary research be undertaken to establish where, if anywhere, fertilizer is indispensable and in what quantities. If fertilizer is found to be necessary in some areas it should be distributed to smallholders at subsidized prices.

6. The above recommendations have significant implications for both the Integrated Agricultural Development Programme and the USAID supported Agricultural Development Loan, both of which have substantial smallholder loan components. It is important that both of these projects be examined in light of the IDS findings on smallholder credit in order to avoid repeating past mistakes.

APPENDIX II

SMALLHOLDER CREDIT - ADDITIONAL ISSUES TO
THOSE RAISED BY THE IDS EVALUATION

The IDS evaluation of the Vihiga smallholder credit project indicates that the costs of the scheme far outweigh the benefits, and thus it cannot reasonably be justified. The recommendation is not only that the Vihiga project be dropped but that similar schemes (where there is no monopoly buyer of the output for which the credit is given) not be undertaken. A strong case is made that Government policy vis a vis smallholder development should reflect this position.

Alternatively, one could examine the experience of past smallholder programmes to determine ways of overcoming some of their major problems, i.e., of increasing the benefits relative to costs, and recommend project design modifications based upon this experience. The IDS position is that any such recommendations would reflect choices that are second best to their suggestions of concentrating on improved extension services to smallholders and subsidized agricultural input prices. Nevertheless, in view of the fact that the Government will be channelling large sums into smallholder credit through the IADP, these issues need to be reviewed.

I. A primary factor contributing to exceedingly high costs in past smallholder schemes is the unacceptably high rate of default among loanes. If repayment cannot be improved, programmes such as those tried in Vihiga or Tetu cannot be justified. Both the Vihiga and Tetu experiences shed light on the question (much of the data below were collected subsequent to the IDS work and so are not included in their report):

- A. Repayment in Tetu was better than that in Vihiga (roughly 80% for the three loans given in Tetu and ranging from a high the first year in Vihiga of 90% to a low in 1973 of 33% - with 44% repayment in 1974).
- B. There were two important differences in the loan designs between Tetu and Vihiga. In Tetu loanes were (a) required to attend a training course at the FTC's where the loan and related issues concerning the farmer's shambas were discussed in detail and (b) in parts of Tetu an organized effort was made through chiefs and subchiefs at loan collection. Neither of these elements was included in the Vihiga project until the initiation of credit brazas (where loanes met to discuss the loan in particular and farm problems in general) near the end of 1974. Though the Tetu data are not sufficient to ascertain for certain, it appears that these two factors were important in explaining the better repayment rate in Tetu.

C. There is considerably better data for Vihiga which has important policy implications. In my minute in file EPD/SC 237/010(3) at folio () the experimental design for the 1974 Vihiga loan is described. Its primary feature is that it allows monitoring repayment behaviour among different categories of farmers in an attempt to determine ways of encouraging repayment. Farmers were divided into four categories: the first consisted of loanees required to present title deeds as loan security, a second were farmers divided into groups of between 4 and 11, with the stipulation that no member of a group could obtain a subsequent loan until all members in his group repaid, a third of loanees who had repaid previous loans and were given unsecured loans, and a fourth of new individual loanees issued unsecured loans. In turn, each category was divided into loanees who needed credit and those who did not.¹ This design was an attempt to test different hypotheses with regard to incentives to repay the loan. Does, as is often claimed by financial institutions, requiring title deeds give an incentive to repay? Does dividing farmers into groups as was done exert social pressure to repay among farmers in each group? Could one expect farmers who had repaid a previous loan to repay again and so have a better repayment record than the fourth category of new individual unsecured loanees? And finally, do those who really need the credit realize the value of another loan in a subsequent year and so repay more readily than those who do not?

were

In addition to the above design, credit barazas (referred to above) held and records kept of the farmers who attended in order to monitor the possible impact of these meetings on repayment. The most interesting results of the experiment are given below.

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|--|-------|
| 1. Percent of loan repaid, May, 1975 | 43.6% |
| Percent repaid - Need Category ¹ | 44.6% |
| Percent repaid - No Need Category ² | 43.1% |
| 2. Percent of Loan Repaid - by Category of Loanee. | |

¹I will not go into an explanation here of how need was determined. If such an explanation is desired I would be happy to address it later.

	(1)		(2)		(3)	
	Percent of Loan Repaid		Percent of Loan Repaid - Loanees Attending 3 or More Credit Barazas		Percent of Loan Repaid - Loanees Attending 4 or more Credit Barazas	
	Need ²	No Need ²	Need ²	No Need ²	Need ²	No Need ²
a) Secured Loanees	45%	54%	67%	62%	94%	100%
b) Grouped Loanees	39%	37%	74%	74%	88%	87%
c) Individual Returned Loanees	64%	53%	78%	68%	90%	93%
d) Individual New Loanees	35%	33%	41%	73%	100%	96%

The conclusions to be drawn from these data are as follows:

1. With the possible exception of individual returned loanees, the differences in the rate of repayment between categories of loanees (secured compared to grouped, etc.) as well as between loanees who needed credit and those who did not (column 1 above) are not sufficiently great to indicate policy directions. That is, it cannot be said that requiring security provided a significantly greater incentive to repay than when security was not required, or that dividing the farmers into groups resulted in sufficient social pressure to affect a higher repayment rate than when farmers were not grouped. Likewise, the hypothesis that those who needed credit would repay at a higher rate than those who did not is not borne out. Thus, column (1) gives us little guidance for designing smallholder loans in order to maximize repayment.
2. What is striking and what does give some information to guide policy are columns (2) and (3). These columns indicate that loanees who attended the credit barazas had a significantly higher repayment rate than those who did not, and that those who attended more barazas had a better repayment record than those who attended fewer (compare columns 2 and 3).

²These categories refer to the division mentioned previously of loanees into those who needed credit and those who did not.

³Though it is not shown above, this conclusion is born out when looking at all loanees (those who attended 1, 2 or however many barazas): there is a high correlation between attendance and repayment.

Can one conclude that the barazas were thus a primary factor in influencing loanees to repay? It can be argued that the farmers most interested in the barazas and so those who had a high attendance record would have been the good repayers anyway; they could be farmers more committed to farming than the average, the commitment itself could be important as a factor influencing repayment, and so these farmers would have been the ones to repay under any circumstances.⁴

The data are not conclusive on this issue. What can be said, however, is that a) because the difference in repayment is so great between those who attended the barazas and all loanees taken together and b) because a substantial proportion of total loanees attended three or more barazas (49% attended 3 or more, 32% attended 4 or more) it is safe to conclude that, for probably a substantial number of farmers, the barazas did have a significant influence in boosting repayment.

3. The importance of this conclusion is that it points to the need to focus upon effective communication with loanees in designing smallholder credit schemes in the future, eg., the Integrated Agricultural Development Programme and the Agricultural Production Loan. Further, it says something concerning the type of communication that is needed. The barazas in Vihiga were not designed merely to inform loanees of their obligations under the loan. To embrace the often heard argument that repayment is normally poor in such projects because the farmers do not understand the terms of the loan is naive. The importance of the Vihiga meetings was that they allowed the farmers to express their problems and perceived needs to the project staff and that this information was the basis for making recommendations to the AFC and the Ministry of Agriculture for project design changes. The farmers perceived that they were having an influence on the planning process, and so were effectively involved in issues that directly affected them. They were involved, in effect, in the process of "planning from below." As the barazas progressed it became more and more apparent to the project staff that, from the farmers point of view, this was an important process.⁵
4. Caution must be shown, however, in not overstating the implications of these results. It does indicate the impact that effective communication and participation can have; it is not, however, the single key to

⁴What is suggested here is that baraza attendance could be viewed as one possible indicator of interest in farming or commitment to one's farm. A similar indicator is suggested in the extensive research done with regard to IDA loans in Central Province by J.D. Von Pischke (see IDS working papers).

⁵This example gives impetus to the expanding literature on the need for involvement of project beneficiaries in both project planning and implementation if one is to expect even marginal project success.

solve the repayment problem of smallholder schemes. One could not expect, for instance, overall repayment to be increased from 44% (the present repayment rate for the 1974 Vihiga loan) to, say, 90%. Some farmers likely will not foresee the need for credit in the future and so the need to establish a good credit record by repaying a present loan. Others will not become involved because they perceive better uses for their time and higher priority uses for their cash income than loan repayment. Nevertheless, the experiment does focus on a critical element that needs close attention in designing future loan schemes.

- D. Again, the Vihiga and Tetu experiences point to the need to incorporate into the designs of the Integrated Agricultural Development Programme ways to affectively communicate with farmers, a mechanism whereby the loan recipients' needs and desires can influence changes in loan design, and effective follow-up in loan collection (as was done, at least to some extent, in Tetu).
- II. A final point needs to be made on the proper role that credit provision should play. As noted earlier, IDS argues that policy should be focused on improved extension services and subsidized agricultural input prices. An alternative argument is that credit to smallholders should be used when it can be shown that it is needed in order to obtain good yields and, when credit is used, it should be thought of as an adjunct to a good extension service. As is discussed in the summary of the IDS smallholder credit report in Appendix I, yields of an number of crops are not as dependent upon high cost purchased inputs as the case for credit provision assumes. The argument can be made that the extension service should concentrate on improving the standard of husbandry and the use of compost and manure first and encourage the use of such inputs as synthetic fertilizers (for which credit might be needed) only when farmers have obtained good yields without it. This approach places the burden of proof on those who argue in favour of providing credit to show that high cost inputs are necessary and so the credit with which to purchase them, rather than initially assuming that these inputs are necessary. A demonstration of the need for such inputs in any given geographical area could be a requirement for credit provision in the design of smallholder credit programmes in the future.

IMPLICATIONS OF THE SRDP ROAD PROGRAMME

The most useful approach in analyzing how the lessons from the SRDP road programme can be put to future use is to begin by stating the recommendations of the IDS evaluation and utilizing the analysis in the report to substantiate or modify the recommendations.

1. Several of the IDS recommendations are based upon the notion that both costs of road construction and subsequent benefits accrue over time, i.e., costs are not a one-shot investment but consist of initial construction costs and a stream of maintenance costs, while benefits (both benefits resulting from lower road user costs and from a stimulation of economic and social activity) likewise are generated over time, likely with few benefits realized initially but increasing as time passes. This notion bears upon the report's recommendations concerning sequential phasing of road maintenance, planning and siting of roads, and evaluation of the development impact of roads. These issues will be treated in turn.

A. Sequential phasing of road investment. The report makes a strong argument that road investment ought, to a large extent, be based on an estimate of costs relative to probable benefits. When roads already exist a primary benefit resulting from improvement is road user savings. But in cases where essentially new roads are being built (beginning with either no road or a track) development benefits are of major significance. These benefits, put simply, are the changes that occur which would not otherwise have occurred had the road not been built (increased agricultural production, increased use of clinics, reducing the prices of goods coming into an area as well as increases in prices of goods exported from it due to transport cost reductions, etc). Probably the most significant practical problem in using the criteria of comparing costs relative to benefits for road investment is that forecasting the benefits is nearly impossible. As a result, the argument is made that new access roads should be built in phases, the first phase consisting of relatively low cost clearing and shaping (the minimum investment needed for all weather passage), a second phase consisting of improving the quality, etc. Only as it becomes clear over time that the accruing benefits justify greater expenditure should the expenditure be made. If the benefits are not forthcoming, the relatively less developed road should not be improved. Related to this issue is the point made in the report that too often the quality of SRDP roads has been determined not by probable resulting benefits but by whether the MOW would take over the subsequent road maintenance. The result has been over-building of (or over-investment in) the roads, i.e., constructing roads of a standard too high to be justified by the benefits.

B Road maintenance and upgrading. Following on the argument above, a strong case is made for labour intensive maintenance and upgrading of the roads constructed under the rural access road programme. The arguments for such an approach are formidable:

- (a) The workers and supervisors trained in constructing the roads become a resource available for maintenance and upgrading;

- b) Such an approach would likely provide more timely attention to maintenance than with the use of heavy equipment (because of scheduling problems in the latter approach) and the extent of maintenance and upgrading could easily be tied to road use (a decision to investing in maintenance and upgrading could easily be based upon the fact that benefits are accruing from the road); and
- c) It would help avoid the problem cited above of over-investigating road construction in order to meet the present high quality required for MO. take-over of maintenance by heavy equipment.

This issue of carrying out maintenance and upgrading of roads using labour intensive techniques is being considered by the MOV and indications are that they will, at the least, test the technique.

- C. Planning and siting of roads - This recommendation stresses that local involvement in siting road segments (as through local committees) can be essential to project success. The report cites the case of Nigori where local competition among different localities for limited investment resources had a positive effect; it was a primary factor in motivating people to contribute labour to the initial clearing stages of the work. In addition, local consensus and enthusiasm can minimize potential problems, e.g., problems of establishing rights of way and of compensation for land used.

This recommendation is made in conjunction with the stress put in the body of the report on incorporating the previously discussed cost-benefit criterion in siting roads as well.

The emphasis upon local involvement is sound. From the SRDF experience it appears to be necessary for an effective programme. Its positive effect could be partially countered by local political interest creating pressure for roads to be built in areas which meet no economic or social benefit criteria; nevertheless, local support is essential.

- D. Evaluation of development impact - In order to achieve sequential phasing of road construction, maintenance carried out by labour intensive methods, and proper siting of roads, the benefits and costs must be monitored. The need for this activity is obvious and the MOV is in the process of carrying it out.

- 2. The report argues that wages should be paid at a level barely sufficient to recruit the needed number of workers from agricultural pursuits during the slack agricultural seasons. Should such a policy be followed, wage rates for casual labour on the roads would likely range from 3/- to 4/- per day, depending on the area. In fact, the wage paid on all SRDF road projects (save the one in Kaponguria) was Rs. 5/- per day during most of the construction

period and raised to 6/75 when, in 1975, the Government raised the minimum wage to that level. There are solid economic, efficiency, and equity reasons for following a wage policy such as that recommended in the report. The argument, put briefly, is as follows:

- the 5/- to 6/75 per day paid on the SRDP projects is above the market wage, and is excessive in the sense that no shortage of labour would exist at a wage that more closely approximates the market wage.
- an excessive wage increases the costs of the roads and so limits the number and kinds of activities in which workers can successfully compete with more capital intensive methods. If the total cost of an operation using labour intensive techniques is higher than the cost of the operation using machines, more likely than not the capital intensive methods will be chosen.
- an excessive wage rate limits the number of man days that can be used within a fixed budget for road construction and so the number of labourers that can be hired is smaller than might otherwise be the case. Fewer people get a larger slice of the wage payment instead of more people getting a smaller slice.
- from a social point of view workers should be employed in labour intensive public works who are the least well used in their alternative employment, i.e., who have the lowest opportunity cost for their time. If a wage offered is higher than what workers think their time is worth in, for instance, agricultural activity, they will be drawn to the employment offered. If the wage were lower, those with the higher opportunity cost (who are more productive in, say, agriculture) would not be motivated to apply. The work force would then be drawn from those with a lower opportunity cost and the cost to the economy of the work force mobilised would thus be lower. In such a case the labour force of a given area would be more efficiently allocated and there would be less disruption to local productive activity (such as agricultural production). A wage that is just high enough to attract the necessary work force and no more is therefore the optimum wage from a social point of view.
- related to the above, the report argues that since the opportunity cost of agricultural labour is high during certain peak labour demand times (during land preparation, weeding and harvesting) in the agricultural cycle, a low wage is ideal for attracting workers in their agricultural off-season when their opportunity cost is low. Thus labour is not diverted from agricultural activities when the value of such activities is high - during land preparation, etc.

The above argument is summarised largely because of the weight given to it in the report. In the IDB author's view the wage policy of the Government of Shs. 6/75 per day in the rural areas is unfortunate. Given

this policy, the above analysis implies the important conclusions and recommendations (in addition to those already mentioned) to that given in the report): 1) in order to help avoid dislocation in agriculture during peak labour demand periods in the agricultural cycle caused by drawing farmers from their fields by the high daily wage rate, the GO should either slow down road construction during these periods or concentrate on that part of the road work which requires a high amount of equipment (and so few labourers), and 2) since the wage paid (6/7) is distorted above the market rate, the GO should not use the distorted wage to make decisions as to whether road construction operations should be labour or capital intensive. Rather, financial calculations which compare labour vs capital costs should be made, preferably in terms of the worker's opportunity cost (as a percentage), say 3/- to 4/-. On the basis of this calculation, agricultural roads may be labour intensive or capital intensive. In some cases this approach might lead to decisions to invest in labour intensive construction rather than capital intensive, though it could be less expensive (because of the excessive wage paid), but it could have a strong equity justification (employment of local labour rather than purchase of machines) and it could save on foreign exchange (not small consideration).

3. One characteristic of the S/D road programme which proved important was that in three of the PDs the A/C was designated as the final agent. The procedure allowed funds to be used as needed in the local areas; the needs of varying localities differ, and it is extremely important that this same degree of flexibility be available for on-the-spot expenditures as needed in the rural access road programme.