

Swedish Support to the Agriculture Sector in Zambia

**A.R. James
M. Davelid
T. Breinholt
D. Chitundu
T. Lundström**

**Department for Natural
Resources and the
Environment**

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Sida Evaluation 01/26

**Department for Natural
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Environment**

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Authors: A.R. James, M. Davelid, T. Breinholt, D. Chitundu, T. Lundström.

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SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY

Address: S-105 25 Stockholm, Sweden. Office: Sveavägen 20, Stockholm

Telephone: +46 (0)8-698 50 00. Telefax: +46 (0)8-20 88 64

Telegram: sida stockholm. Postgiro: 1 56 34-9

E-mail: info@sida.se. Homepage: <http://www.sida.se>

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Executive summary

This report and its annexes do two things. First, they evaluate three Sida projects supporting the agriculture sector in Zambia: Economic Expansion in Outlying Areas (EEOA), Land Management and Conservation Farming (LM&CF) and Multiplication and Distribution of Seed and Planting Material (MDSP). Secondly, they review the present situation of the agriculture sector in Zambia in relation to the objectives for Sida support, and suggest a way forward for further Sida support for agriculture in Zambia.

Concerning the project evaluations, we consider all three projects have been pursuing development fields which are of crucial current importance in Zambia, both now and in the future.

EEOA recognises that rural people lack skills to develop their businesses in farming and other related areas. Over a five year period, it has trained people in target outlying districts in business management, organisation and marketing. EEOA represents a new approach in Zambia. It sees project involvement being limited to a period of about four years. After that period, a “critical mass” of rural people and experience will have been created in the Districts, and the people can move forward on their own. EEOA is essentially a private sector project. It works with various government agencies, but it has no allegiance to any single government organisation in its field operations.

EEOA has productively adopted a process approach involving the active participation of beneficiaries, leading to very positive progress in many fields. However, the sustainability of the EEOA model after four years has not yet been tested. This is the next logical step for the immediate future.

LM&CF has been concerned with the improvement of land management and conservation among small-scale farmers in Zambia. Sida support has been provided in this crucial field for nearly fifteen years by LM&CF and its predecessor project SCAFE. LM&CF operates essentially within the public sector. Its main aim is to train and otherwise support the field operations of the Zambian Ministry for Agriculture Food and Fisheries (MAFF) to extend better, yield-enhancing techniques to rural farmers. Recently, LM&CF has played a significant part in the promotion of new conservation farming techniques which appear to have potential for widespread increases in yield at low cost.

Two difficulties are apparent in the LM&CF approach. First, the project has not been measuring the impact of its work on the actions of farmers (e.g. yield increases obtained) with sufficient attention. Secondly, LM&CF's position within MAFF has not allowed it to explore to the full other possible ways of providing extension to rural farmers at grass roots level. These matters notwithstanding, in our view it is certainly not the right time to abandon the fields which LM&CF has been addressing. There is now a need to extend Conservation Farming as widely and as rapidly as possible. Further, while other forms of extension provision need to be explored, the MAFF service is certain to play an important role in the short and medium term future. With the long experience of LM&CF and SCAFE at hand, Sida is in a strong position to assist in this crucial work over the coming years.

MDSP is a partnership involving the beneficiaries, a private sector company, an NGO, MAFF and Sida. The project has been assisting in the establishment of seed growers' associations to produce and distribute seed of improved traditional crops. In our view, the demand for MDSP services is clearly apparent, and the project has progressed well, both in terms of its technical objectives and its management. However, most of the seed growers' associations are still in their infancy, and they need further support if they are to be sustained.

In summary, we conclude that the fields which are currently being supported by the three projects were valid at the outset, they remain valid now, and it would be wrong for Sida to abandon support in the field which they cover. In making this recommendation, we do not mean that all three projects should be extended in exactly their present forms. Rather, we recommend that Sida supports, as a first priority, a thorough agriculture sector programme preparation, taking account of items (a) to (f) below:

- (a) It appears Zambia is in the process of quite rapid change. Although there is still much to be achieved, people generally have started to become used to a liberalised market. The intention of moving towards a more democratic society is reflected in government policies for decentralisation and the promotion of private sector activities in fields which are the business of that sector. With a national election expected later in 2001, it remains to be seen how these processes will progress.
- (b) Government of the Republic of Zambia (GRZ) involvement in the agriculture sector is also changing quite rapidly. MAFF has already taken significant steps in withdrawing from direct involvement in implementation of agriculture development, and in assuming new coordinating and monitoring roles. At the time of writing, GRZ, the private sector and NGOs are openly involved in the formulation of a new policy and national sector programme for agriculture in Zambia. The outcome of these discussions is obviously relevant to future Sida support.
- (c) In the future, we see a logical place for a Sida-sponsored agriculture sector programme which fits into the GRZ Zambian agriculture sector programme. Each of the present Sida-supported projects in the agriculture sector is valid in its own right. However, they have in large measure been conceived separately, and cannot be regarded as a programme. In our view, a future programme preparation should start with four things (i) GRZ policies (when they are finally decided), (ii) Sida policies (poverty, gender, good governance, environment), (iii) the experience of Sida-supported projects, and (iv) a knowledge of what other GRZ agencies and donor-sponsored projects are doing. From analysis of (i) to (iv), a preparation team would synthesise a programme for Sida-support in agriculture which is internally consistent and features integration between component projects (both Sida projects and projects sponsored by other organisations). The need for internal consistency and integration does not mean a new Sida agriculture sector programme should cover all aspects of agriculture. In our view, it is quite acceptable if areas are excluded because they are being covered by other agencies and projects, provided effective links with new Sida projects are established.
- (d) Programme preparation should conform fully to conventional programme/project management cycle systems. A key element of these systems is the logical framework. Some difficulties experienced by the current projects lead us to suggest that Sida could usefully prepare clearer Guidelines on these subjects.
- (e) In programme preparation, special attention should be paid to:
 - Definition of the target population or populations which are as precise as possible. Definitions of target populations to date have been rather too general, and this gives difficulties in targeting and monitoring during implementation, and assessment of impact afterwards.
 - Institutional responsibilities and arrangements should be carefully planned. In the agriculture sector, the scope and responsibilities of MAFF, the private sector and NGOs have changed recently, and will continue to change in the future. Zambia is looking for new types of implementing partnership, and we consider it important that Sida assists constructively in that evolving process. This means avoiding the “locking” of projects into a government

channel (as has largely happened in LM&CF), or the deliberate distancing of a project from government (as has happened in some respects in EEOA).

- New projects need to ensure the full involvement of representative, District-level management and coordination institutions. This is proposed in the interests both of local sustainability, and of strengthening local democratic processes. In Petauke, EEOA happens to have coincided with a UNDP project for the strengthening of District Councils. The striking difference in organisation between Petauke and other areas illustrates this requirement.
 - Under the new liberalised regime, the prime incentive for development is the market. In all future agriculture sector projects, management needs to have access to support in marketing, either from the project resources, or from those of a cooperating project.
- (f) We consider it essential that the planning for a future Sida-sponsored programme and projects in the agriculture sector be done in a thorough and fully participatory manner. To establish the relationship between agriculture, poverty, gender and the environment, a certain amount of study work is likely to be required during preparation. Further, new implementing partnerships flourish much better if all of them are involved in open forum in the planning of the programme/project. This applies in special measure to project beneficiaries who always bring to the planning discussions items which the professional planners do not know.

The present projects complete their terms at the end of the year 2000. Given the work required in preparation, it is unlikely that a new programme could be prepared and approved by that date. We therefore recommend an extension of the present projects for a period of one year, during which the preparation would be undertaken. The current projects would extend under their present terms, but in addition, would contribute to the preparation process.

Organisation of the work, the main report and the annexes

The Evaluation was carried out in Zambia over a five week period in January to March 2001. The fieldwork included visits to Sida Project field activities in Northern, Eastern and Southern Provinces of Zambia, together with discussions with project beneficiaries, Sida staff, Government of Zambia and other implementing authorities. Full details of the people consulted are given in Annex 6. The fieldwork included a seminar in Lusaka during which the major evaluation issues were discussed by all relevant parties. Further details of methodology for the evaluation are given in Annexes 1, 2 and 3.

Annexes 1, 2 and 3 are the Evaluations of the three projects EEOA, LM&CF and MDSP. Drawing on the material in these annexes, the Main Report summarises the present situation concerning agriculture sector development in Zambia, and makes suggestions for a way forward for Zambia – Sweden cooperation.

In the Main Report, Chapter 2 concerns the issues of poverty, gender and environmental sustainability. Sida's approaches to these are discussed in outline, and the projects' achievements are summarised.

Section 3.1 gives a picture of the recent history and present situation in Zambian agricultural policy and sector programming. Currently, the situation is in transition, with a new policy and agriculture sector programme currently being discussed and formulated. Therefore, the comparison of Zambia's and Sweden's policies (*Section 3.2*) has to be regarded as provisional. *Section 3.3* notes some past inconsistencies between policy and practice which have caused concern in the past and still do today. *Sections 3.4 to 3.7* comment on current developments in Zambia's agriculture sector, with special reference to Sida's ongoing programme of projects, and the past, current and future roles of government, donors, the private sector and NGOs.

Section 3.8 brings this information together, and notes how it applies to the current discussions for a new agriculture sector programme in Zambia. It finishes (in *Section 3.8.4*) with a list of choices for Sida. The Evaluation Team's suggested choice involves a continuation of Sida support for agriculture in Zambia

Chapter 5 presents supporting arguments for continued Sida support, and *Chapter 6* contains suggestions for a future Zambia – Sweden agriculture sector programme. In the latter, we suggest that there is a good case for continuation in all the fields which are currently being covered by Sida-sponsored projects. However, in some cases, we consider a change of approach would be appropriate (*Section 6.5*). In addition, we consider a future agriculture sector support from Sida would could best be mobilised in the form of an internally consistent programme, to which all future Sida-sponsored projects would contribute (*Sections 6.1 to 6.4*). In our view, a new Zambia – Sweden programme in the agriculture sector will benefit greatly from a participatory approach in both its planning and its implementation. We think it would be appropriate for Sida to allocate time and resources to do this.

The Evaluation Team has taken into account throughout its work the policies, practices and views of the Government of Zambia and of Sida. However, this report is an independent evaluation, and the views in it are not necessarily those of the Government of Zambia or Sida.

Finally, the Evaluation Team apologises for the length of this draft document. At present, matters are changing quite rapidly in Zambian agriculture, and it has been considered wise to comment on these changes (including some relevant background history). Further, the Evaluation Team became aware in Zambia that partners wished for as much detail and explanation as possible concerning our suggestions for the future. We hope that the length of this draft will be understood in that context.

1 Agriculture in Zambia

1.1 Human population and farming

The present state of the agricultural sector in Zambia is well documented (References 1, 3, 5, 12, 14, 18 and 22).

In brief summary here, Zambia has a population of some 10 million people. Population density is high in places along the line of rail and in a few other rural locations (including the southern part of Eastern Province). Elsewhere, population is quite scattered, and there are substantial areas, including National Parks and other reserves, which are empty. Zambia has an annual birth rate of 3.5 percent.

Of a total of 75 million hectares, nearly 60 percent is classified as having medium to high potential for agricultural production. By the most recent estimates, only 14 percent of Zambian land is currently used for farming.

Drought is a common hazard for farmers in the south (rainfall below 800 mm per year) and a moderate hazard in the centre of the country (rainfall 800 to 1000 mm per year). Elsewhere, rainfall is normally not limiting.

Nearly all Zambian farmers are smallholders. Among these, about five percent are emergent commercial farmers. The remainder are either viable but vulnerable farmers, or non-viable farmers (Section 6.1.4). Estimates of the percentages in these two groups vary widely.

Poverty and malnutrition are portrayed as widespread problems, and without doubt they are. However, national statistics on these parameters are not considered very reliable (Reference 12).

Agriculture presently generates about 22 percent of GDP, and provides the main livelihood for two thirds of the population.

Zambia is described as a country with a high agricultural potential which is minimally exploited. This statement is correct in the sense that a wide range of crops could grow well in most parts of the country. However, at present Zambia's smallholder farmers are held back by their inability to participate in the liberalised market economy. In major part this owes to the fact that most smallholder farmers are engaged in low value products for which there is no significant export market. In part it owes to lack of experience, and in some cases chronic ill-health, among smallholder farmers. But in large measure, it owes to their current position, locked in a poverty trap (low production, leading to low income, leading to low savings, leading to low investment, leading to low production).

In the last five years, GRZ and donor cooperation (including that of Sida) have started to put into effect some innovative strategies designed to break the poverty trap. Although the overall impact is limited as yet, results are sufficiently encouraging to merit further support.

1.2 Outline of recent sector-oriented assistance for agricultural development

The change of government in the early 1990s led to a complete change in the principles governing the agriculture sector in Zambia. Suddenly, farmers had to be able to adapt to a free market economy. It is obvious that such a transition cannot occur at once, and indeed the process is still substantially in transition today.

In the pursuance of a rapid and efficient resolution of this transition, Zambia adopted in the mid-1990s a sector plan approach for agricultural development. This took the form of the **Zambian Agricultural Sector Investment Programme (ASIP1)**, running from 1996 for five years (in the event, six). The approach followed a full sector investment programme format, including basket funding. Initially, GRZ and donors were enthusiastic, with World Bank contributing in large measure, and various donors (including Sida) signing on to projects which conformed to ASIP1, both in principle and practice.

However, things went wrong after a fairly short period. In large measure, this owed to the broad and all-encompassing nature of the ASIP1 programme which included all the technical fields which GRZ were addressing through its Ministry of Agriculture, Food and Fisheries (MAFF). Implementing functions under ASIP1 were expected to be transferred to the private sector (including NGOs), but progress in this transfer was limited. By 1997, ASIP1 was substantially being implemented by MAFF.

Government protested that the private sector was unable to take up the tasks that it was being offered. The private sector protested that government involvement and controls were still too widespread, making it difficult for them to compete fairly and openly. Most multi-lateral donors stayed with ASIP1. Bi-lateral donors (including Sida) adhered to their initial commitments under ASIP1, but progressively looked for solutions outside the sector programme.

A well presented mid-term review of ASIP1 was completed in 1998 which pointed out that the match between the ASIP1 sub-programmes (all of them defined according to technical themes) and the functional units in MAFF and other implementing agencies was not made clear in the programme design (Reference 18, page iii). The study also noted that ASIP1 was a complex programme with too many programmes for effective management. Other identified constraints included delays in the restructuring of MAFF, and inadequate MAFF capacities in planning, coordination, monitoring and evaluation, and financial management. The ASIP1 mid-term review suggested a range of solutions, but few of them were acted upon.

By 1999, disaffection with ASIP1 was widespread. At that stage, the people of Zambia and donors waited for a clear statement of future intent from GRZ in the form of new policies and strategies.

2 Poverty, Gender and the Environment: Project experience to date, and mainstreaming in the future

2.1 Concepts and analytical frameworks

2.1.1 Sida's Concept of Poverty and an Analytical Framework

In the Swedish Government report, *The Rights of the Poor* (1996/97), poverty is described in three dimensions: capabilities, security and opportunity.

- *Capabilities* are mostly understood as (a) economic capacity: including income, assets, savings, and (b) human and social capacity: including health, knowledge and skills.
- *Security* against unforeseen events such as sickness, accidents, injustice, economic and political crises etc. Remedies can be achieved, for instance, through social networks and security systems, enactment of legislation, etc.
- *Opportunities* for taking control over one's life refer to possibilities and options for participation in decision-making, in economic activities, etc.

This broad understanding of poverty is also adopted by Sida and forms the overall basis for Sida's work in poverty alleviation. An important characteristic of this definition is that it includes more factors than just economic poverty. This more encompassing understanding comes closer to poor people's own descriptions of poverty. At the same time, it has the disadvantage of being more difficult to use as a measure. On how many dimensions do you have to be poor, before you will be recognised as poor? Judgement on this is highly contextual and often very subjective. Therefore, clear indications are needed in each case to describe what poverty is.

The poverty-reducing interventions of various development policies, programmes and projects may take different forms, which are important to distinguish. A mainstreamed distinction lies between direct interventions, inclusive interventions, interventions through policies and institutions, and finally indirect interventions. Direct interventions provide direct benefits (for instance food aid) to the poor. Inclusive interventions include poor people in the target group, along with other groups. Policy and institutional changes can be in the form of sector reforms and other changes at meso- or macro-levels, which will have a bearing on the conditions for the poor. Finally, infrastructure works will often have indirect impact on poverty e.g. by opening up economic possibilities or by further marginalising poor groups in areas not covered by the works.

The impact of the different types of intervention can be short-term or long-term. At one end, the impact of humanitarian aid is often very direct and short-term, whereas long-term effects are less obvious. At the other extreme, overall national economic growth or construction of large-scale infrastructure works often have few short-term effects on the poor, but can have profound long-term effects, either positive or negative.

Most activities or interventions can be seen to have had some sort of impact in the form of a reduction or an increase in poverty. It makes no sense to talk about interventions having or not having an impact on poverty. Rather the direction of the impact (positive or negative) and the nature of the impact (direct, inclusive, institutional or indirect) is of greater value in an assessment.

The causal links in poverty reduction (or increase) are often very complex, and the time span between intervention and impact on poverty reduction can be long. Further, it can often be difficult

to verify whether the reduction in poverty has been caused by the specific intervention and not by other influencing factors. This is one of the general problems faced by any evaluation of the impact on poverty of development interventions.

Thus, guiding principles for an assessment of the projects and our recommendations for the future overall programme will be:

- For projects/programmes aiming to reduce poverty it should be made *explicit* in which way they address poverty alleviation (directly, inclusively, through policy or indirectly). Any assumed and implicit linkages to poverty reduction, which are not made explicit, will be more difficult to assess and measure.
- Interventions aiming to reduce poverty should both have relatively *immediate* measurable positive impact, and should have *long-term* positive impact (benefit the children of the poor, and enable them to reduce their poverty) for the intervention to have significant poverty reducing impact.

Sida has initiated a couple of studies to review how poverty is addressed in Sida's country strategy papers. The second of these studies¹ concludes that Sida reports are gradually addressing the issue of poverty more explicitly, but that Sida policies and country strategies are still vague in their definition of poverty and in outlining how poverty should be treated.

In general, assessments of the poverty situation in Sida programme countries are informative and qualified. But analyses of impact and results of project and programme interventions are less well prepared and less clear. This can to a large extent be referred back to a lack of clear definitions of poverty and a lack of clear strategies for alleviation of poverty. This calls for a continued effort in the process of programme formulation, implementation and evaluation to define more clearly what poverty is in each case and how it will be addressed.

2.1.2 Sida's Concept of Gender and an Analytical Framework

Sida's understanding of gender is in line with the mainstream understanding within development policy. Gender includes not only men and women, but also different groups within the two sexes. Often young women have very few assets, few rights and very little security, whereas older women have achieved assets, rights and security in, for instance, land tenure. Similarly the wealth of older men is in most cases significantly higher than the wealth of young men. Also special groups such as divorcees, widows and childless women encounter differences in opportunities and conditions, which influence their relative wealth or poverty.

Gender analysis is thus a question of assessing which different gendered groups are relevant, and what are their respective situations and conditions. For each project or programme activity, it should be considered and assessed how different groups can participate and what are the conditions for their involvement. As for poverty, impact can be direct, inclusive, institutional or indirect. In most cases, activities and projects, which do not pay special attention to the individual gendered groups will benefit the strongest gendered groups most, and will have little impact, or a negative impact on the weaker gender groups.

In the Zambian context, gender assessment is closely linked to poverty assessment in the sense that gender deals with the inequalities between men and women, their different roles, young and old,

¹ Lennart Peck and Charlotta Widmark: Sida documents in a poverty perspective. A review of how poverty is addressed in Sida's country strategy papers, assessment memoranda and evaluations. Sida Studies in Evaluation 00/2. Sida Secretariat for Policy and Socio-Economic Analysis

which are, to greater or lesser extents, embedded in tradition and cultural practices. These differences and inequalities lead to different possibilities and opportunities, and can thus easily lead to differences in wealth. This applies in particular when we use the broad definition of poverty, which includes not only economic aspects but also human, social and power aspects.

2.1.3 Sida's Concept of Environmental Sustainability and an Analytical Framework

Sida's approach to environmental sustainability is quite clear. It recognises that projects and programmes can do a great deal of damage, sometimes irreversible damage, if the impacts on the environment are not predicted at the outset, and catered for effectively throughout implementation. To this effect, Sida Guidelines (Reference 108) stipulate (a) an environmental impact study should be undertaken during programme/project implementation, and (b) a review of environmental impacts should be undertaken as part of project evaluation. Further, Sida has a standard checklist of criteria to judged in each and every environmental assessment. This list is comprehensive and is used as the framework for the environmental assessment in this evaluation (Annex 4).

Thus, the task for this evaluation turns to the matter of tracing how issues of environmental sustainability were taken into account in shaping the current projects, and what impacts (positive or negative) have occurred. In respect of the first of these, we have to say here that the picture of how environmental sustainability was used to shape the projects is not wholly clear. At the design stage of projects in the agriculture sector, one approach involves the initial conception of a project in technical terms (better, more productive techniques and/or better services) and in human terms (who are the target people and how will they benefit), and the application of a check during the design that the proposed activities will either lead to enhanced environmental sustainability or, at worst, will avoid any significant deterioration in the environment. A second approach is to examine at the outset the relationship between agriculture and the environment at a national scale in the target country, to identify trends which are matters of environmental concern, and to tailor projects specifically to address those concerns.

In countries such as Zambia, environmental issues can never be anything less than crucial in relation to agriculture sector development. Farming is Zambia's main occupation and user of land. In terms of farming (and other land-based activities), experience suggests that conservation of resources and adoption of techniques which are environmentally sustainable can only come when the benefits of adopting these approaches and techniques become things which the farmer clearly realises are in his or her own interest. In Zambia, farmers are substantially locked into a cycle of low productivity and poverty. Thus any initiative to improve farmland productivity (such as LM&CF and MDSP) is bound to favour environmental sustainability. At the same time, projects which are designed to encourage former subsistence farmers to make money out of their farms (such as EEOA), also favour environmental sustainability. Farmers come to realise during their transition that money from farming cannot be generated in anything more than the very short term unless the systems used are environmentally sustainable.

In this situation, application of the principles of environmental sustainability in agriculture becomes a bit more than simply checking that a project is essentially friendly towards the environment and is not going to damage it. Rather, a relevant criterion becomes a matter of how a project can do the maximum possible which it could do to address the important environmental issues in the country concerned.

Obviously, a first step in this analysis is to know what those important environmental issues are. In Zambia, farming pressure on land is low overall, but there are areas where it is high and families are having to migrate. Further, farming is very much not the only important user of land in rural

Zambia. Forestry and wildlife are said to have great productive potential. But in many respects, notably their demand for land, their development appears to conflict with farming development.

The need for agricultural projects to do the maximum possible which they could do to address the important environmental issues is particularly relevant in geographical targeting. Obviously, GRZ and Sida would like to mobilise projects in areas where they are likely to have maximum benefits. In the case of projects like LM&CF, this seems to select for areas which have combinations of high existing pressure on land and low carrying capacities (e.g. because of poor soils or low, unreliable rainfall. Likewise in the case of projects which could lead to expansion of the farmland area, it would seem appropriate to avoid making inroads into valuable forest resources or into areas which are crucial for wildlife conservation or development.

Our point here is not to state that the current Sida projects are in the wrong places, or are doing environmentally unsustainable things. By and large, it seems that field activities have been organised to take local environmental considerations into account. At the same time, it is not clearly apparent from the project documents how this has been done.

2.2 Overall assessment of impacts of Sida Projects in Zambia in achieving reduced poverty, better gender equality and environmental sustainability

2.2.1 EEOA

EEOA aims at improving living conditions for rural people, focusing on economic development. EEOA also includes capacity and, to a less extent, security as relevant aspects of improved living conditions. Thus, in general terms, EEOA aims at decreasing poverty very directly, addressing rural people who are mostly poor.

Whereas the definition of (outlying) target areas for EEOA is thoroughly elaborated, the definition of the EEOA target group (all individuals and institutions involved in agriculture-related activities) is loose, giving little indication of which groups to address with specific activities. This can perhaps be explained by the EEOA project concept, which is based on a couple of important assumptions on poverty. First of all, EEOA seems to consider economic growth to be an engine for reduction of all forms of poverty, economic, human and social. Secondly, the project assumes that economic growth for a critical mass of the rural population in an area will have positive trickle-down effects on other members of the same communities and reduce their poverty as well the poverty of the direct target group.

Even though the facilitation process elaborated by EEOA in many ways adopts a very comprehensive understanding of empowerment and capacity building for individuals and communities, this is not systematically reflected in the internal evaluations of impact on poverty. EEOA's monitoring and evaluation of impacts in reducing poverty is concentrated on measuring increases in income among the direct target group. This approach assumes (a) that increased income for the target group will lead to increased income for others as well, and (b) that increased income in the short term will lead to reduced poverty in the long term.

Short term increases in income have indeed been recorded, and in those terms EEOA has had a positive effect on poverty reduction. But who has become less poor, and how sustainable the impact is, are questions which are more difficult to answer. At the start of the project, there were only scattered assessments of the character of poverty in the targeted outlying areas, and the variance within them. Therefore, it is difficult now to assess the actual impact on different groups, either within or outside the direct target group.

Furthermore, the non-economic aspects of poverty are not discussed explicitly. Possible impacts, which are not discussed by EEOA, could be an increased vulnerability of participants stemming from increased emphasis on cash crops combined with reduced emphasis on staple crops. Other possible impacts, such as increased marginalisation of the poorest groups, who cannot participate in the cash economy, have not been investigated and we can only speculate about their relevance. In general, security is an aspect of poverty, which EEOA seems to deal with only in very superficial terms.

Gender, on the other hand, is directly addressed in the EEOA project. The approach has been refined during project implementation (a) by holding discussions with target households about gendered roles and opportunities, and (b) by provision of special assistance to women and other weak gender groups. EEOA thus combines direct and inclusive methods, and effect seems to be significantly positive.

To date at least, it seems EEOA has had no negative effects on the environment. This is partly due to foresight by the project in ensuring agro-chemicals are used in appropriate amounts and are safely handled. There is a concern that the kindling of business interests and activities in farming could have unwanted impacts in the future leading, for example, to an unplanned expansion both of the farmed area, and of clear-felling within fields. This applies in particular in areas with undulating topography. We suggest that EEOA ensures that future new and follow-up work with beneficiaries properly covers the concepts of investment in the maintenance of long-term resource productivity, i.e. the observance of environmental sustainability in the interests of the farming business in question.

2.2.2 LM&CF

The overall aim of LM&CF is to improve land management by farmers. This aim addresses the insecurity and economic incapacity of poor farmers by attempting to improve their resource base, and thus their options for gaining increased incomes.

The choice of techniques and the adaptation of those techniques to different groups and types of farmers are the crucial factor which determine whether LM&CF reaches the poor, or rather reaches relatively well-off farmers in relatively poor areas. It is an obligation of a project like LM&CF to monitor the adaptability of the technologies to different groups, and to make sure that technologies which are well adapted to poor farmers' conditions (e.g. farming on borrowed land) are part of the package.

So far, LM&CF seems to have established a set of rather general extension messages and approaches, without much adaptation of the technologies to the conditions of specific groups. The participatory extension methodology, which has been introduced recently by LM&CF, should assist in this adaptation through the process whereby farmers select the technologies which fit their conditions, and adapt them to their specific situations. To the extent that this process has become established, LM&CF should be able to draw upon the lessons learned by the farmers, and to capitalise on the experience of adaptation done by individual farmers by feeding it into the overall extension messages.

Similar considerations apply in the treatment of gender in the LM&CF project. The first steps have been taken to increase gender awareness among both extension staff and participating farmers, and preliminary assessments have been made of how well the different LM&CF techniques are adapted to women's and men's farming practices. The latter work has not yet been followed up and operationalised among field staff. Indeed, it will require significant follow-up before extension staff can apply gender techniques in their field work.

By its nature, LM&CF promotes environmental sustainability through increasing yields per unit area, recycling of soil nutrients, reducing physical erosion and breaking of farmers' dependence on inorganic fertiliser. Some of the LM&CF target areas visited by the evaluation team (especially in Eastern Province) were clearly well chosen as targets, suffering as they do from relatively high human population densities, and substantially exhausted soils. At the same time, it is difficult to work out from LM&CF reports either (a) the extent to which it was predicted at the outset that LM&CF measures would remedy the problems of high pressure on exhausted land, or (b) the extent to which they have actually remedied those problems through project implementation. One has little doubt that the land husbandry and conservation measures being promoted by LM&CF are beneficial. The question which hangs is how effective have they been in solving the land pressure problem (5 percent, 50 percent, 100 percent?). Given that conservation farming techniques have recently come into the limelight as techniques for improving low-productivity small-scale farming in Zambia, it seems to us especially important to keep track of the impact which their promotion is having on the major environmental problems of the target areas.

2.2.3 MDSP

The overall aim of MDSP, i.e. improving the availability to small-scale farmers of better seed for important food crops, is in general terms highly relevant to poverty reduction. As initially formulated, MDSP was in danger of indirectly increasing poverty (a) by eroding the reproduction of local landraces, thus increasing vulnerability of poor farmers, and (b) by strengthening a process whereby seed is provided only on cash basis, and becomes difficult to obtain without cash payment. Changes in concept occurred during MDSP implementation. Exchange of seed on barter terms was acknowledged as an important element in local seed distribution, indicating that MDSP is getting better adapted to benefit poor farmers. At the same time, few MDSP activities directly address the poorest sections of the communities and their special situations.

MDSP has taken gender into account by encouraging as many female seed growers as possible. Through the experiences gained with this approach, MDSP stands a good chance to learn at the same time about gender-specific interests and priorities. But a gender analysis relating to seed production and utilisation has not been done for the project, and no systematic extension effort is currently being deployed to even out the different conditions of men and women. For instance, several married couples collaborate on seed production, but with clear divisions of tasks and benefits, in which men produce and sell the lucrative seed crops, while women are left with 'women's seeds' and are allocated poorer soils by their husbands. At present, these divisions along gender lines are not being addressed by MDSP extension.

The activities of MDSP are unlikely, in themselves, to lead to major imbalances in environmental sustainability. However, increases in cultivation of finger millet and cassava among secondary beneficiaries is likely to lead depletion of soil fertility and, in some cases, to a lowering of long-term land carrying capacity (Annex 3, Section 4.9). We recommend MDSP takes a more proactive role in sensitising farmers and training extension agents in the need for sustainable farm practices. Whether this task is done by MDSP itself, or through other cooperating channels, depends on locally available resources (including activities of other projects).

2.3 Mainstreaming of poverty reduction, gender and environmental sustainability

Poverty reduction, gender and environmental sustainability are sometimes referred to as cross-cutting issues. For some, this gives the impression that poverty, gender and the environment are, in some manner, independent variables. In practice, it is normally found that all three of them are

closely related to people's activities, playing decisive parts in determining what people presently do, and what they can do in the future. In places where farming is the major occupation, they are all related to farming.

Thus, if GRZ and Sida wish to ensure that poverty reduction, gender and environmental issues are properly taken into account, we argue that there is no option but to introduce them into the planning matrix from the start of programme/project design, and to maintain them there throughout project implementation. Two practical measures are suggested:

The first involves inclusion in the programme/project design a careful, analytical study of the present situation. The study would:

- (a) identify the present agricultural systems, their constraints and potential for improvement;
- (b) identify the present incidence and distribution of poverty (according to the various criteria in Section 2.1.1), gender balance and environmental hazards in the target area and among the target people, together with the reasons for these;
- (c) based on (a), prepare a list of development options for agriculture which takes account of the limitations imposed by (b), and predicts in each case the impact on poverty, gender and the environment.
- (d) select the best option from (c).

We strongly recommend that the work above be undertaken, not just by a project planning team, but together by the team, the beneficiaries and all other relevant participants in a fully participatory manner. The involvement of the beneficiaries is clearly of importance. Beneficiaries often have different perceptions of the conditions of poverty and the environment, and of the relevance of gender. It is essential that they be allowed to express these without feeling they are items in the agenda which are imposed from outside.

The second measure involves the inclusion at the appropriate level in the logical framework of Indicators to measure the change in situation concerning poverty, gender and the environment, and the monitoring of those Indicators at suitable intervals during programme/project implementation.

The level at which Indicators of poverty reduction, gender equality and environmental sustainability would be introduced would clearly depend on the nature and scope of the programme or project. The most likely level would be as Indicators of the project/programme Immediate Objective.

It is appreciated that the procedures advocated above will require time and resources. In most cases, some survey work will be required in order to elucidate the relationship between, for example, present farming systems and the incidence/distribution of poverty. And later, once the parameters of the programme/project have been decided, resources will be required for base-line studies of the items in the Indicators.

It is a frequent complaint of evaluators that information by which to evaluate a project does not exist or, if it exists, it is of the wrong type. The approach above would do much to avoid this, by ensuring that the relationships between relevant parameters are completely understood before the intervention starts, and that the base-line studies and Indicators concentrate on topics which truly reflect how those relationships are changing as the programme/project progresses.

3 Performance of the Agricultural Sector in relation to the Objectives for Sida's Support to Agricultural Development in Zambia

3.1 Objectives for Sida's Support to Agricultural Development in Zambia

These objectives for the period 1999 to 2001 are given in Reference 109 and Reference 107 (pages 12 and 13). Summarising from the latter, they are:

- (a) Preservation of natural resources and promotion of sustainable agriculture through plant breeding, efforts to increase the production of high-yield seed, and soil management.
- (b) Economic and social development, through the provision of support for economic development in outlying areas. This will be achieved through facilitating investment in small-scale agriculture-related activities. Special priority will be given to farmers gaining understanding about how markets work, and the creation of such markets.
- (c) The guiding principle will be to support ASIP1, and to channel part of the aid to non-public sector recipients. Capacity and institution building in the ASIP1 framework will focus on the planning, management and monitoring functions of MAFF.
- (d) A focus on gender is both necessary and logical since women bear the main burden of agricultural work.

Among the six current Sida-sponsored agriculture sector projects in Zambia, MDSP, SHAPES, CFU and LMCF conform to paragraph (a), EEOA to paragraph (b), PPB to paragraph (c), and all should conform to paragraph (d).

It is interesting to note the initial budget allocations to the various types of support. Following the classification above, projects in (a) have SEK68m (50 percent), (b) SEK55m (41 percent), and (c) SEK12m (9 percent).

Adopting a different classification, SEK52m (39 percent) is for public sector activities (PPB and LMCF), SEK24m (18 percent) is for private sector/NGO/public sector partnerships (MDSP, SHAPES), SEK4m (3 percent) is for an NGO technical service-provider (CFU), and SEK55m (41 percent) is for private sector development alone (EEOA).

3.2 Agricultural policy and its compatibility, impact and importance in relation to food security, poverty reduction, the environment and gender issues

3.2.1 Outline of the New Draft Agricultural Policy

In the draft document (Reference 251, Section 1), overall agriculture policy, specific objectives and sector strategies are expressed in the following terms (quoted sections being in italics):

The overall agriculture policy is to facilitate and support the development of a sustainable and competitive agricultural sector that assures food security at national and household levels, and maximises the sector's contribution to gross domestic product.

The policy will be realised through (the attainment of) five specific objectives:

- 1) *to ensure national and household food security through dependable annual production of adequate supplies of basic foodstuffs at competitive prices* (food security)
- 2) *to ensure the existing agricultural resource base is maintained and improved upon* (environmental sustainability)
- 3) *to generate increased income through increased agriculture production and productivity* (poverty alleviation, increasing incomes)
- 4) *to contribute to sustainable industrial development by providing locally produced agro-based raw materials* (economic development, generation of employment)
- 5) *to increase agricultural exports, thereby enhancing the sector's contribution to the national balance of payments* (economic development, generation of employment)

The document then moves to a list of twelve sectoral strategies:

- i) Strengthening and monitoring the liberalisation of markets and facilitating private sector developments
- ii) Diversification of agricultural production
- iii) Strengthening and facilitating the provision of agricultural services in order to increase productivity, particularly among smallholder farmers
- iv) Reviewing and realigning institutional and legislative arrangements
- v) Development of infrastructure in potentially productive agricultural areas
- vi) Development and promotion of appropriate technology
- vii) Promotion of gender equity in resource allocation and access to agricultural services
- viii) Promotion of sustainable and environmentally sound agricultural practices
- ix) Prevention and control of pests, crop and livestock diseases of national importance
- x) Strengthening emergency preparedness
- xi) Regulate the introduction and use of bio-technological products, in particular, genetically modified organisms
- xii) Maintaining agro-biodiversity

Both the specific objectives and the strategies are amplified in the draft document. It then moves to a definition of sub-sector objectives and strategies under the headings agricultural extension, agricultural seed, crop research, animal health, animal research, animal production and extension, fisheries, legal framework, marketing, and agricultural credit and finance.

Under each of these headings, a detailed list of “specific objectives” and “strategies” is presented for each sub-sector. Together these amount to 55 sub-sector “specific objectives” and 85 sub-sector “strategies”.

Also within these headings, the draft policy discusses the future of each sub-sector in terms of institutional and legal frameworks.

3.2.2 Significant Items which are Contained in the Draft Agricultural Policy and which Relate to Sida's Objectives for Agricultural Support to Zambia

Food security is emphasised at policy level as specific objective 1. We presume it is to be achieved primarily through the implementation of sectoral strategies (ii) diversification of agricultural production, and (x) strengthening emergency preparedness.

Poverty reduction, while not mentioned per se, is reflected directly at policy level in specific objective 3. We presume it will be achieved primarily through the implementation of sectoral strategies (ii) diversification of agricultural production, (iii) strengthening and facilitating the provision of agricultural services in order to increase productivity, particularly among smallholder farmers, (vi) development and promotion of appropriate technology, and (ix) prevention and control of pests, crop and livestock diseases of national importance.

Environmental sustainability (at least within agricultural areas) is emphasised at policy level in specific objective 2. We presume it will be achieved primarily through the implementation of sectoral strategies (viii) promotion of sustainable and environmentally sound agricultural practices, (xi) regulate the introduction and use of bio-technological products, in particular, genetically modified organisms, and (xii) maintaining agro-biodiversity.

Gender equity is mentioned at sector strategy level in (vii) promotion of gender equity in resource allocation and access to agricultural services.

Turning to a comparison of the draft policy and the objectives for Sida's current support for agriculture in Zambia (Section 3.1):

Sida's objectives in Section 3.1, paragraph (a) are reflected in the draft policy in sectoral strategies (ii), (iii), (vi), and (viii).

Sida's objectives in Section 3.1, paragraph (b) are reflected in the draft policy in sectoral strategies (i) and (v).

Sida's objectives in Section 3.1, paragraph (c) are reflected to some extent in the draft policy in elaboration of sectoral strategy (iv) which includes:

- *building the capacity of MAFF to provide efficient services to farmers, and*
- *building the capacity of farmer groups to service their members efficiently.*

In addition, the draft policy indicates *future implementing roles for institutions within and outside government* in almost all of the defined sub-sectors, including:

- (a) *In pursuing its liberalisation policies, government will not ordinarily intervene in input distribution or crop marketing in a way that will undercut private sector participation, especially if the private sector has the will and capacity to do so* (Reference 251, Executive Summary).
- (b) *Government has liberalised the agricultural markets and emphasised the need for the private sector to take the lead in agriculture sector development. However, it is recognised it will take time for markets to be fully liberalised and to function effectively. Government will therefore continue to play the role of providing market information, rehabilitation of infrastructure and facilitating private sector led input and output marketing* (Reference 251, Section 2.1.1).
- (c) *The policy of government is to encourage credit to resource-poor farmers. However,.....the private sector response is expected to be slow, particularly to smallholder farmers. Government will therefore remain engaged on a transitional basis in providing credit to resource-poor smallholder farmers. This will be done through government institutions, or in collaboration with private sector partners and NGOs...*(Reference 251, Section 2.1.1).

- (d) *While government privatises and commercialises some of the agricultural services, it will continue to provide such services as research, crop extension and market information* (Reference 251, Section 2.1.3).
- (e) *MAFF will provide extension and information through the Department of Field Services with its network at national, provincial, district, block and camp levels. The private sector and NGOs will also be expected and encouraged to provide extension services to farmers* (Reference 251, Section 3.1.1.4).
- (f) *MAFF's role (in connection with animal, production, extension and health) remains that of coordinating, facilitating, monitoring and regulating. Government will continue to encourage the private sector to provide livestock services to farmers* (Reference 251, Section 4.1.3).
- (g) *Government will collaborate and coordinate with all relevant institutions involved in agricultural marketing and input supply. The private sector shall assume an increasingly leading role in the procurement, supply and distribution of agricultural inputs and outputs. Government will progressively disengage in response to growth in private sector capacity in agricultural marketing* (Reference 251, Section 6.1.4).
- (h) *Provision of rural credit and finance will be undertaken by the public and private sectors* (Reference 251, Section 6.2.4).

3.2.3 Significant Items which are not Contained in the Draft Agricultural Policy which Relate to Sida's Objectives for Agricultural Support to Zambia

The reader of the draft agricultural policy has no clear guidance concerning how the specific objectives and sectoral strategies at policy level (listed in Section 3.2.2) link up with the ambitious and all-encompassing lists of 55 “specific objectives” and 85 “strategies” at sub-sector level. In fact, most of the sub-sector strategies are simply Activities, listed according to technical field, and conform closely to the scope of activities presently covered by MAFF.

Given GRZ's seemingly chronic shortage of funds, there seems to be a clear case for accepting that now it is not the right time to try to advance on all fronts, simultaneously and in equal measure. On the contrary, three factors – (a) the fact that most Zambian farmers are still poor in spite of much GRZ and donor support over recent decades, (b) the fact that the transition to a free-market agricultural economy is partly accomplished and needs to be progressed as rapidly as is practically possible, and (c) the shortage of GRZ funds – all these would suggest that now is the time for a carefully justified *strategic choice* of top priorities, accepting in the process that not everything can be done at one time. Within the draft policy no such choice is discussed or made.

In this situation, one might expect government to wish to focus on specific target groups within the farmers of Zambia on the grounds that some groups are more deserving than others. There are some references to target groups in the draft agricultural policy (mainly to smallholder farmers), but it contains no in-depth analysis of the situation, nor any clear indication of how the 85 strategies are expected to impact on the various different farmer groups.

For Sida, there may be a further specific concern. Food security, poverty reduction, the environment and gender issues are covered by specific references in the draft agricultural policy. However, as it stands, the policy contains very little indication of how these themes are to be put into practice (i.e. which of the sub-sector “strategies” are to be emphasised in order to address the four themes). Gender and the environment are both subjects of separate GRZ policy documents, but the draft Agricultural policy contains little indication of how its content relates to those policies or the actions which they imply (Reference 151, page 6).

Finally, the nation-wide problem of HIV/AIDS, and how agricultural development can be organised to help sufferers and their families, is not mentioned in the draft Agricultural policy.

3.2.4 Overview

In summary, the draft agriculture policy contains references to each of Sida's main concerns except HIV/AIDS. At the same time, their mode of presentation raises doubts about how the policy is going to be implemented. The draft policy and its bearing on the formulation of a new agriculture sector programme are discussed further in Section 3.8.

3.3 Coherence between the current national agriculture (and other relevant) policies and how they are applied

3.3.1 General

Technically, it is impossible to make a comparison of current agricultural policies and how they are being applied because the new policy is still in draft. However, the new draft policy, while containing some significant innovations in detail, does not differ significantly in structure and basic content from the previous policy. Under the previous policy, a number of things happened which challenged GRZ's record in respect of the consistency with which they were implementing that policy. These are still matters of concern today.

3.3.2 Food Reserve Agency activities

The most prominent concern is the matter of continuing GRZ involvement in matters which, following their professed policy of liberalisation and private sector involvement, should be the business of the private sector. A clear example is the continued involvement of GRZ through the Food Reserve Agency (FRA). Ostensibly, the role of FRA is to act as a strategic food reserve. In practice, FRA has a wider role, specifically in the importation, transport and distribution of fertiliser on seasonal credit to small farmers. FRA's performance has been plagued by management problems. In past years (and again this year, 2001), FRA fertiliser has arrived much too late at the farm gate. At harvest time, farmers complain that their yields are insufficient for repayment of the cost of the fertiliser. FRA then relaxes the repayment terms.

Faced with this situation, people in the private sector do not see how they are expected to develop their businesses on a competitive free-market basis when government continues to import and distribute fertilisers at subsidised rates. All organisations involved in agricultural credit question how farmers are to be encouraged to manage and repay loans when the terms of repayment under FRA are frequently relaxed.

Questions are also being asked about the targeting of FRA fertiliser, specifically how substantial amounts are continuing to end up on large farms and in other hands when the assistance is said to be specifically targeted at the small-scale farmer. Rightly or wrongly, FRA is widely viewed as a non-transparent organisation whose activities are determined in large measure by political factors.

3.3.3 The Role of MAFF

A second matter of concern is the role of GRZ through MAFF. In the 1990s, Zambia moved from a command economy to a liberalised economy. As part of that change, it was expected that MAFF would seek to withdraw in a clear and orderly fashion from a wide range of its previous mandate implementing functions (including marketing, input supply and service provision, credit, extension and research), and would instead concentrate on the core functions of government in a liberalised market economy (policy and strategy formulation, legal regulation, inspection and monitoring and evaluation).

MAFF has in fact undergone substantial and constructive changes in its roles. It has largely ceased to be involved in marketing, and has quite genuinely accepted and promoted involvement of the

private sector and NGOs in many fields which it used to operate itself. GRZ also recognised, quite rightly, that an abrupt withdrawal of MAFF involvement in some important sectors (especially extension and research) would be disastrous. Instead a managed transition was required.

The key problem is the fact that it has not yet been specified, either in policy (including the new draft) or in any form of scheduled plan, how that transition will actually be managed in respect of MAFF. The absence of such a policy statement and plan is difficult to explain.

The result today is the persistence of wide differences in expectation concerning the appropriate roles of the private sector, NGOs, donors and MAFF in respect of key transitional services.

Changes in the function of MAFF clearly mean changes in MAFF staff numbers and functions. While some restructuring has occurred at MAFF, there is a general recognition that this process has not gone far enough. However, the matter of how much further it should go and what MAFF should be like after such a process is, as yet, not clear at all (Section 3.5.2 contains further discussion of MAFF and its present position).

The problems above are continuing matters of concern for donors who would dearly wish to cooperate with a proactive and cost-effectively organised MAFF which has a clear view of how to manage its core functions. The more so, it is a matter of concern for present employees of MAFF, who frequently hear that further restructuring is likely to happen, and do not know where they stand.

3.3.4 Decentralisation

Further causes of concern in respect of policy and practice relate both to agriculture and government policies in other sectors. A key matter in this regard is decentralisation and democracy. Promotion of democracy has been a central theme of GRZ expressed policy since the early 1990s. Concurrently, GRZ have recognised, again expressly, that decentralisation is a crucial means of achieving a more practical and resilient democracy.

In practice, a major problem remains. Despite the preparation of several drafts, no finally agreed policy and strategy for decentralisation has been agreed by central government. Most government organisations, including MAFF, have decentralised, but that process has taken different forms in different line ministries, resulting in confusion of responsibilities at Province and District levels. In 2000, the appointment by central government of non-elected District Administrators as the highest authorities in the Districts (above the elected District Council and District Secretary) led to further confusion. Recently, District Executive Officers have been appointed to support and service the District Administrators.

In the agriculture sector, as in others, progress in development depends crucially on the emergence of local level institutions (farmers groups and associations, for example) who can articulate and demand services, and the parallel emergence of local governments which accept as their duty the task of providing those services in a responsive, fair, transparent and democratically accountable manner. While GRZ profess to support the development of this situation, it is very difficult to see how their actions (as summarised above) have assisted.

One should add that the present picture in local government and democratic government, while a matter of serious and widespread concern, is not wholly gloomy. A few Districts appear to be taking steps to overcome the constraints. These steps and further background concerning decentralisation is in Section 4.6.

3.4 Inputs, Marketing, Extension, Infrastructure and Credit/Financial Support: capacity, involvement and impact of GRZ, MAFF, NGOs and the private sector for the benefit of smallholder farmers

3.4.1 General

This section covers three of the TORs, i.e.:

- To evaluate the capacity and impact of MAFF, agribusiness and NGOs to deliver marketing, extension and financial support to small-scale farmers
- GRZ support to facilitate a positive development of the market economy, in terms of credit, infrastructure and inputs
- The present situation in the rural credit and investment sector, and the overall credit and marketing conditions for small-scale farmers

3.4.2 Inputs and Marketing

Following the change to a liberalised market economy, government has substantially and largely successfully withdrawn from direct involvement in input supplies and formal marketing, handing over to private companies (Amanita, Omnia, Zamseed, Cheetah Zambia, the cotton companies, etc) (Reference 151, page 4).

Smallholder farmers, especially those living in outlying areas, have had substantial difficulties in adapting to this new system. Poor roads and long distances have played their parts in deterring private suppliers and marketeers. More significantly, smallholder farmers wishing to make money from selling crops have been put in a situation where they have to take much wider responsibilities in organising their own input supplies and marketing. Some of them (although not as many as is sometimes perceived) lack sufficient knowledge of farm enterprise operation (Section 4.7). Even if they have these skills, they have difficulty in securing good prices because they do not know what the current local and Lusaka prices are. Economies of scale (and new economic opportunities) in supply and marketing can be tapped into by smallholder farmers who organise themselves into farmer groups. But, as yet, few smallholder farmers have the skills and experience to organise and operate such groups. Finally, the previous regime of state involvement in transport for input distribution and crop marketing has left many parts of rural Zambia without a network of small formal market places. Farmers with crops to sell have to go to the “boma”, often involving lengthy journeys over poor roads.

In this situation, it is little wonder that individual smallholder farmers have difficulty in accessing inputs and selling their crops. They have limited knowledge of how to manage farms as money-making enterprises, and they have little idea about the advantages of operating in farmer groups under market economy conditions. When they have a crop surplus to sell, they have the option of (a) transporting that surplus to a “boma” market without knowing the price it is going to fetch, or (b) waiting at home for a marketeer to arrive on one of his infrequent visits, and negotiating a farm-gate price, again without knowing the “boma” market prices.

Solutions to the problems above can be summarised in four main fields (i) farmer training in enterprise operation, especially as groups, (ii) a better system of market information, (iii) a better network of links between farmers, suppliers and marketeers to identify and exploit existing and new market opportunities, and (iv) improved infrastructure: better roads and more local market places.

Starting in the 1990s, a range of projects have started to address these problems. The Zambian National Farmers Union has been a lead organisation, concentrating in particular on solution (i) and (ii), both in its own right and with NORAD assistance. Several NGOs (World Vision, Care, Africare) are working in field (i). Sida-supported EEOA has focused on (i), (ii) and (iv), but not so much on (iii). And the CLUSA project (Reference 11) is tackling (i) and (ii).

These projects are organised and operated on the basis that solutions (i) to (iv) are essentially matters for the private sector to solve, without government involvement. The projects thus attempt to follow strict private-enterprise principles, and, by and large, they are doing this. Therefore, the fact that government persists in distorting market forces through direct Food Reserve Agency involvement in inorganic fertiliser distribution on credit (Section 3.3.2) is a matter of major practical concern, both to these projects and to private sector companies. Government's grounds for so doing are founded on its perception that the private sector and the projects listed above are, as yet, nowhere near attaining solutions (i) to (iv), and riots will break out if government does not intervene. In addition, MAFF continues to maintain a limited local advisory input in marketing in the form of District Marketing and Cooperatives Officers (DMCOs). This service is intended to cover items (i), (ii) and (iii).

Concerning the future, the Evaluation Team considers that

- (a) Solutions (i) to (iv) need to be pursued with high priority.
- (b) Projects should focus on an integrated and simultaneous implementation of all four solutions (i) to (iv). In particular, item (iii) establishment of a better network of links between farmers, suppliers and marketeers to identify and exploit existing and new market opportunities, needs to be explored and pursued more actively. A means of combining the four solutions through local "development facilities" is suggested in Section 4.8.
- (c) Concerning implementing organisations, government should, in our view, withdraw without delay from all direct involvement in input supply and marketing. NGOs have the capacity to provide important supporting services, especially in respect of solution (i) farmer and farmer-group training in enterprise operation. But they have little practical experience in fields (ii) to (iv), or in overall management. An overall implementing network of functional institutions which leads naturally within a project to the sustainable solutions for (i) to (iv) is still required. ZNFU have some capacity in this field. An alternative model, logically involving ZNFU and other relevant agencies, is the establishment of local "development facilities" (Section 4.8).

3.4.3 Agricultural Extension

Until recently agricultural extension has been the mandate of MAFF, in terms of planning organisation and implementation. Implementation has been through the MAFF Department of Field Services network of extension staff extending to Block and Camp levels. Up to the mid 1990s, the implementing mandate of MAFF for extension was reflected in the fact that several projects designed to improve smallholders' crop yields and farm productivity were focused wholly on improving MAFF capacity to promote those improvements. These projects include LLFSP Luapula Province (with Finnish support), ASSP Southern Province (with GTZ support), Sida-supported SCAFE and its successor, LMCF.

Starting in the mid-1990s, stakeholders started seriously to look at variations to the standard MAFF extension approach. The then established "modified T & V" extension methodology was criticised as "top-down" and inefficient; as an alternative, the participatory extension approach (PEA) was explored (*inter alia* by LMCF). PEA is currently being piloted in twenty pilot Districts, a third of the

country in terms of area, with assistance of World Bank. Concurrently with the move towards PEA, and linked with it, the focus in extension started to shift from one in which solutions to low yields and productivity were devised by MAFF and prescribed to farmers, to another in which farmers were able to identify their problems, discuss possible solutions with people who are trained to know what solutions are possible (the extension agent and his/her back-up staff), and to demand the chosen services. In turn, this has focused interest on farmers' capacity to participate fully in this form of cooperation, e.g. capacity building in farmers' groups, and the concept of the lead farmer as a means of disseminating relevant extension messages.

These changes have led to a shift in perception of the objectives of agricultural extension. Previously, achievements were measured in terms of, for example, number of storm drains constructed or area of *Tephrosia* planted, on the assumption that such improvements always give increases in yield and productivity. They may indeed have done this, but the extent has very rarely been measured in the field. Now, the focus is on the actual improvements in yield and productivity attained by the farmer. With this shift has come the realisation that factors other than farmers' knowledge of good crop and land husbandry determine his/her attainment of higher yields and productivity. Availability of labour (and its relationship to farmers' health) has come into focus. In addition, farmers' reasons for wanting to attain better yields and productivity have come to the fore – to avoid hunger in the family (i.e. food security), to make money by selling crops (i.e. commercial farming, however small the scale), or both. The existence or absence of markets, and ease of access to them by a farmer, has thus come to be recognised as an important consideration in extension-oriented projects. Likewise, the fact that communities usually contain various different types of farmer, with different views of yield increases and why they should want to achieve them, has led to thoughts about stratification of target farmers.

The issue of what farmers need and demand in terms of extension has been brought to the fore by the recent advent of conservation farming. Viewed by some as a single technique, conservation farming is, of course, a range of land and crop husbandry techniques. These techniques raise the crop producing capacity of the farmer and his fields, using methods which make best use of locally available resources (water, organic matter, labour) and avoid the need for expensive and frequently unavailable inorganic fertilisers. As such, the conservation farming group of techniques has great future potential for smallholder farming in Zambia. At the same time, the fact that it is a range of methods means that the extension agent has to know what all the methods are, and provide advice on them to farmers whose needs are likely to differ within the same block, even from farm to farm. In this situation, provision of good agricultural extension becomes a quite demanding task.

A further relevant change is occurring. Adoption of the policy of liberalisation in the agriculture sector imposes on government at all levels the need to examine its new role. Some core functions will always be with government. Other functions have to be entrusted to the private sector (including NGOs) if those organisations can do the task in question in a more effective and efficient manner. At the same time, government has an overall public role in ensuring that all people have access to essential services. If the private sector and NGOs are not ready to take on full responsibility for providing essential services, there is a clear case for continuing government involvement. However, care is needed to avoid a situation in which continuing government involvement effectively blocks the development of private sector and NGO participation (Sections 3.3.2 and 3.4.5).

Applying these principles to agricultural extension, there are concerns at present that the MAFF network is not delivering the required services in an effective and efficient manner. These difficulties stem, *inter alia*, from (a) the fact that many extension agents are not yet fully trained in participatory approaches or in the complex matters of conservation farming/sound land husbandry, (b)

salaries of extension agents are meagre, leading to rapid staff turnover and resulting in substantial numbers of unmanned field extension posts.

At the same time, it is clear that neither private sector companies nor NGOs are in positions fully to take over the present roles of the MAFF field network. Experiments along these lines are being conducted by NGOs and projects in various places. Some initial successes can be claimed. However, most of them have been achieved in places where farmers can grow and market new relatively high value crops (e.g. CLUSA-supported farmer groups, Reference 11). As yet, it is difficult to identify any viable model for private-sector (or NGO) provision of extension services in the many outlying places where, as yet, market opportunities are limited and market links are undeveloped.

In this situation, there is a clear case now for the further exploration of new methods which can provide effective extension services, both within the MAFF system and outside it. The persistence, on the one hand, of widespread hunger in Zambia, and the apparent potential of new conservation farming techniques directly to solve that problem, means that the progression of this experimentation is, today, a top priority in Zambia's agriculture sector. With its experience of cooperation in SCAFE, LMCF and other Sida-sponsored projects, Sida is in a strong position to provide effective assistance (Chapter 6).

3.4.4 Infrastructure

All institutions mentioned in the title of Section 3.4 are concerned in some manner with infrastructure relating to agricultural development. Focused GRZ commitment is apparent in a national road network which, in spite of low overall population density and scattered population distribution, is generally very good. On the other hand, local and feeder roads in Zambia are in generally poor condition, contributing to difficulties, and substantially increasing costs in marketing and supply of inputs to smallholder farmers. In some outlying areas, feeder roads are so bad that communities are effectively cut off from markets.

Under the liberalised economy, large input supply and processing infrastructure (cotton gins, coffee processing, fish freezing, etc) are essentially responsibilities of the private sector in terms of investment and operation. Government still has a stake in some of these companies (e.g. ZAMSEED), but this is not hindering them from operating in a private sector manner.

Infrastructure needs at the local level are less well served. In particular, water supplies in many rural locations are rudimentary and unreliable, leading to widespread and frequent disease. Local market infrastructure is poorly developed, meaning that farmers who have something to sell have to find money for transport over long distances before they can sell it. Other than the towns, few places away from the line-of-rail have electricity or any form of communication. The absence of local market infrastructure and communications means that rural farmers are often unaware of market prices for crops.

Zambia has a network of storage sheds. Many of these are public property, owned by the Food Reserve Agency, and intended for storage of inputs (mainly fertiliser) and crops. Given the seasonal nature of FRA activities, and their operating difficulties (Section 3.3.2), many of their sheds lie empty for most of the year. In some cases, FRA offers them on lease, but the lease charges are too high for smallholder farmers.

Various initiatives are being operated in attempts to address these local problems, most of them on the basis of matching grants. These include Rural Investment Fund (RIF – World Bank sponsored), REEF in EEOA, and community grants under a Development Fund for LLFSP, Luapula (sponsored by Finland).

By accounts, results have been mixed. The largest such programme, RIF, has reported successful disbursement. However, there are now doubts about whether the benefiting communities are fulfilling their contributions in the form of maintenance of the infrastructure provided. Further, there are concerns that RIF, despite its emphasis on participation of the community in planning, has ended up supporting infrastructure which, in some cases, is little used.

A main concern of the matching grant systems is the fact that it can end up by paralleling, or even by-passing, the local government system which should have responsibility for infrastructure development. The present difficult predicament of local governments is described in Sections 3.3.4 and 4.6. These difficulties notwithstanding, it is considered that an elected District government, and not a project or an NGO, should rightly decide on the priorities for infrastructure. Further, a District government should also have the right to say they would prefer infrastructure development to be part of a locally generated and agreed plan for the overall economic development of an area. If a District Council has no such plan (a situation which applies in the majority of Districts at present), its members should be able to ask the project which should be ready to help. In this manner, new project-funded infrastructure becomes less like a thing which falls out of the sky and, instead, becomes the provision of help to local economic development, sensibly directed according to local, democratically decided priorities. This approach would also favour better maintenance of new infrastructure, in that the District Council would become fully responsible for ensuring that beneficiaries carry out the required maintenance tasks.

3.4.5 Credit/Financial Support

Prior to the early 1990s, GRZ was directly involved in provision of credit to farmers through a range of credit institutions which made loans available on a variety of subsidised terms. At the start of liberalisation (and with the notable exception of its involvement through the Food Reserve Agency: Section 3.3.2), Government withdrew from agricultural credit.

The established agricultural credit channels, at that stage mainly Lima Bank and farmer cooperative credit schemes, promptly collapsed. Loans were available at that time (and still are) from the commercial banks. But such loans, with their high interest rates and short duration scenarios, are not suited for farmers.

Through the 1990s, credit schemes have been operated by commodity companies for specific crops in the form of outgrower schemes. At one stage, these were largely confined to cotton and tobacco. Now they are operating for other crops – coffee, paprika and sunflower (Sections 4.2 and 4.4). These schemes have mainly benefited emergent small-scale commercial farmers. But, small-scale commercial farmers account for no more than five percent of Zambia's small-scale farmers.

The majority of the remaining small-holder farmers have no access to any type of formal credit other than through the Food Reserve Agency. Throughout Zambia, there are some exceptional farmers who are operating within small-scale credit schemes organised by NGO and donor projects. These include the recently completed Smallholder Development Project (supported by IFAD), the Luapula Livelihood and Food Security Programme (supported by Finland), and a range of NGO-sponsored projects. Credit arrangements are also available in the Sida-supported EEOA and MDSP projects. In these cases, the immediate beneficiaries are the more entrepreneurial farmers/seed-growers.

Following the substantial withdrawal of GRZ from direct support of agricultural credit in the early 1990s, it was hoped that qualified private-sector financial institutions would take over their roles, and would develop in sufficient numbers to give a reasonable network of credit outlets for farmers and to offer value for money through competition. This did not happen.

From the standpoint of a private-sector financial institution wishing to provide services to Zambia's farmers, the immediate question is whether farmers would be both willing and able to pay back loans according to contractually agreed terms. Interviews with potential financiers state that they are very willing to operate with small-scale farmers on the simple, but strict condition that government stays out of the business. They justify that condition on the grounds that government blurs the matter of paying back according to contract. The fact that (a) the new draft Agricultural policy states "...government will, on a transitional basis, provide credit to smallholder farmers..." (Reference 251, page i), and (b) GRZ allows its activities through the Food Reserve Agency to continue (Section 3.3.2), sends a clear signal to potential private sector financiers of farming that now is still not the right time to enter the market. One might expect potential financial institutions to take a more confident view in the case of donor funds. In practice, they very largely have not, on the grounds that most donor funds are by government-to-government agreement, and the risks still apply. Recognising this problem, bi-lateral donors, including Sida, have been drawn to the alternative model of direct financing.

These difficulties described above have been reflected to Sida in the experiences of EEOA. The project's initial line of credit modelled too closely the approach of the commercial banks, and failed to disburse significantly. It is, as yet, too early to judge whether the current EEOA credit model through Micro-Bankers Trust will succeed. One further financial institution is known to be in operation at present. This is Credit Management Services of Kabwe. This company has a patchy record, apparently satisfactory in the case of CLUSA, and clearly unsatisfactory in the case of FAO and LLFSP in Luapula Province.

In simple conclusion, it seems government is waiting for the private sector to take over, and the private sector is waiting for government to get out of credit for good. It seems the only logical way for this matter to progress is for government to change its stance.

3.5 The extent and content of cooperation between MAFF, and the different multilateral and bilateral donors

3.5.1 General

To some extent a response within this title could be written in technical terms. However, it is considered worthwhile, and indeed more valid, to reflect upon it in terms of the current stances of the institutions involved and the people who work for them, i.e. GRZ staff in Lusaka and in the Provinces and Districts, and donor cooperation staff – donor representatives in Lusaka, and donor project staff working on their projects. In this regard, recent history through the term of ASIP1 is relevant.

3.5.2 The Position of MAFF

In 1999, a joint GRZ/World Bank study of agricultural extension services (Reference 16, page iii) chose to portray the situation in MAFF as follows:

"The MAFF restructuring programme, and filling of staff vacancies should be urgently completed. However, without a radical change in the institutional culture, the MAFF restructuring programme will result in marginal efficiency gains only. With independent external assistance (preferably from the private sector, and not necessarily expatriate), MAFF should prepare and implement a Cultural Change Programme (CCP) through the entire Ministry. The programme should be designed to effect a change in staff attitude, philosophy and culture, and to institutionalise an agreed set of operational and professional values over time. As an integral part of CCP, the overall management philosophy of MAFF should be re-oriented

from one of control, and [instead should] focus on Inputs to one of the Output achievements, holding staff accountable for their performance and the achievement of the agreed Outputs. Such fundamental changes profoundly affect the institutional philosophy, and therefore all individual staff from the top management through to the frontline extension agent. It calls for the institutionalising of a completely new set of values and nothing less than a deep renewal for all those concerned, either directly or indirectly. Over time, a completely new institutional culture emerges.”

These strong words were written no more than two years ago. It is interesting to reflect now (in February 2001) on how things have changed, not just within GRZ and MAFF, but among the donor community and project staff.

First, one may reflect on the fact that the authors of the GRZ/World Bank Study were writing at a time three years into ASIP1. By then, ASIP1 had in large measure become a MAFF-implemented programme. In Reference 16, the World Bank may well have been regretting how things had turned out in 1999, but the fact remains that the methods and approach deployed by the World Bank at the start of ASIP1 were, in a significant measure, responsible for causing that situation (Section 1.2).

Changes towards a new role in the agricultural sector have taken place in MAFF since 1999. As yet, these changes are not widely discernible in the MAFF institutional face at National Headquarters. But they are apparent in the views of many individual staff. Frequently, one may hear widely differing views expressed by the same person, those views being determined by the company in which they are expressed. The difference between such ‘personal views’ and ‘official views’ is a fairly sure sign (a) that things are not right as they are, and (b) that things are changing.

If things are changing, why are they not more readily apparent in MAFF’s institutional stance? Two factors are relevant. First, restructuring of MAFF has not proceeded as initially intended. MAFF staff know that a MAFF, after what the GRZ/World Bank study calls a Cultural Change Programme, will be a MAFF with fewer staff. Understandably, MAFF staff do not want to stick their necks out, for fear of losing their jobs. The second factor is a matter of institutional, and ultimately, political allegiance. Now in 2001, MAFF is undoubtedly a less control-oriented institution than is portrayed in the GRZ/World Bank Study. Witness the much wider basis of consultation in the successor programme for ASIP1, and the embracing by MAFF of the participatory extension approach. At the same time, elements of the control-orientation still seem to be apparent, less in respect of MAFF itself, and more in respect of the relationships between MAFF and other government organisations.

A change in MAFF away from control towards facilitation and coordination is generally more apparent outside Lusaka than within it. Decentralisation was a prime theme of ASIP1. While decentralisation is very far from complete within GRZ as a whole, it has been implemented to a substantial extent within MAFF. Today, this is reflected in a greater readiness of PACOs and DACOs to see their jobs in terms of coordination and facilitation rather than control. Not surprisingly, this change is most apparent among Zambia’s nine PACOs. Under ASIP1, a search for efficiency led to the direct channelling of funds from HQ to the Districts. This meant the responsibilities of the PACO were changed overnight from implementation to coordination and facilitation. After an initial period of resentment, feeling that they had been sidelined, the PACOs appear to have taken up these new functions with relish and commitment. Thus, in a crucial sense, the PACOs have been leading the way in the development of the new facilitation and coordinating roles of MAFF.

3.5.3 The Position of the Donors

From the point of view of both MAFF and the donors, it is perhaps a matter of regret that the GRZ/World Bank Study does not focus on the approaches and measures which multilateral and bilateral donors could take to assist in what the authors call MAFF's "Cultural Change Programme".

Once it was clear that ASIP1 was becoming a programme which MAFF saw as their role to implement, there was a change in attitude on the parts of donors. By and large, the multi-lateral donors, having in-built links with Government, maintained direct support for ASIP1. This was clearest in the case of World Bank who regarded itself as the prime guiding institution in donor support for ASIP1.

In contrast, many bi-lateral donors chose to distance themselves from ASIP1, largely on the grounds that they did not see a situation in which MAFF was the prime implementing agency as sustainable. Differences in timing and history meant that bi-lateral donor projects ended up with different degrees of adherence to ASIP1 and the MAFF implementing role. The Sida-sponsored LMCF and GTZ-sponsored ASSP, Southern Province are among the current bi-lateral projects which conform most closely to ASIP1/MAFF. At the same time, other bi-lateral projects proceeded which have very little to do with ASIP1 and MAFF. The USAID-sponsored CLUSA project, and the Sida-sponsored EEOA are examples. In the late 1990s, more bi-lateral projects were commenced which involved partnerships between MAFF, NGOs and the private sector.

It may be difficult now to understand how a project such as EEOA can have started and progressed under the ASIP1/MAFF regime. A part of the answer is the ASIP1 programme itself. The programme encompassed all aspects of agricultural development. This meant it was not difficult to pick out passages in the ASIP1 programme document which could justify just about any project in the agricultural sector. EEOA is certainly not the only project which has proceeded on this basis. Several were started in the late 1990s which coined token adherence to ASIP1 and pledged a minimum of funds to the programme basket. These are good entry points for further dialogue with MAFF concerning its changing role. There is already positive experience of how implementation can be carried out through collaborating public and private sector organisations.

In the preparation of ASIP1, it was noted that Zambia had 184 separate donor-sponsored agriculture sector projects, many of them area-based, and most of them doing different things in different ways. This approach was recognised, rightly, to be ineffective and wasteful. At the time, a better future was seen in which donor projects would be part of a coordinated national agricultural programme which (a) avoided duplication and overlap, (b) avoided the use of methodologies which had already been demonstrated as inappropriate in previous projects, and (c) contributed together, in a rational, integrated and efficient form, to the development of agriculture in Zambia. This was a main guiding principle in the preparation of ASIP1.

By the late 1990s, there were fewer projects. But the standards of integration were no better than they were before ASIP1. In attempting to coordinate projects, MAFF concentrated largely on the need to keep the different projects apart in respect of their technical and geographical areas of coverage. Cooperation between projects and donors in the interests of technical and methodological integration was not explored to the full. The main constraint here was, and still is, MAFF's limited capacity to coordinate, this capacity being limited by the circumstances and conditions under which MAFF staff work, and not by their professional capability.

Given this situation, and given that regular informal donor coordination meetings, chaired by FAO, have been held throughout, it is reasonable to ask why the donors (with a few exceptions) did not take comprehensive steps to integrate their project approaches and activities among themselves.

The Evaluation Team has no complete answer to this question. Perhaps the main reason was that it was clearly MAFF's job to do the coordination; any move to coordinate projects behind MAFF's back would have been wrong. A second reason could have been that bi-lateral donors considered themselves fortunate to have been given MAFF's blessing to proceed with their projects, and did not want to bring up complicating issues of integration with the institution which had given them that blessing. Whatever the reasons, the informal donor coordination of the late 1990s, by and large avoided the issues of inter-project and inter-donor integration.

The consequence of events in the late 1990s was a miscellany of GRZ and donor-sponsored projects. Some of these projects have achieved impressive results, both in improving the lot of their target groups, and in testing new methodologies and implementing partnerships. At the same time, these projects have not been effectively integrated, and the sum of the MAFF and donor-sponsored initiatives has been very far from a sector programme.

By accounts, the publication in draft of the new Agricultural Policy and the quest to devise a successor programme for ASIP1 has brought new life to the donor coordination committee, the latter benefiting at present from strong FAO leadership. The key requirements at present, both for the Committee and for MAFF, are:

- (a) the need to identify the fields in MAFF which require strengthening for its to assume its facilitating and coordinating role in full under a successor programme for ASIP1
- (b) the need for donors (all of them) and MAFF to define together, and to adhere to together, sub-programmes and projects in the agricultural sector which are properly integrated and coordinated.
- (c) the need to implement regimes of systematic and coordinated monitoring by projects, with monitored information being fed in to the coordinating base in MAFF. This means that project staff have to be constantly aware of how their work fits into the national picture, and relates to work in other projects.

In respect of (b), the bi-lateral donors and MAFF should cease to circumnavigate the coordinating principles of a sector programme in the interests of pursuing donor-supported projects. Instead, they and their contracted implementing agencies should at all times concentrate on planning and implementing projects which are oriented towards an integrated sector-wide approach.

3.6 Synergy Effects between Sida-supported Agriculture Projects (and those supported by other donors and GRZ)

Within the Sida projects, links between LMCF and CFU were foreseen from the start and have been explored productively. There have, in addition been instances of synergy between Sida projects in areas where they happen to coincide. Those noted by the Evaluation Team include cooperation between MDSP and LMCF for seed growers and other farmers in Gwembe District, EEOA training in participatory methods for LMCF-sponsored extension agents in Petauke, Chadi-za and Katete Districts, and EEOA training in business management for MDSP-supported seed growers in Northern Province.

While these instances of synergy and cooperation have been productive, they seem to have happened in a somewhat *ad hoc* fashion, largely in places where project geographical areas happen to overlap. An alternative approach is possible in which staff from all six projects sit down together at regular intervals, discuss progress together and identify fields in which their advice and/or their actions could be of assistance to one another. This option does not seem to have been explored to the full.

In part, this situation owes to the different geographical distributions of the projects. Table 6.1 shows the distribution of effort by District of the four area-specific Sida projects, EEOA, LMCF, MDSP and SHAPES. In part, it owes to the histories of the projects, their different designs at different times, and their choices of target districts, areas and farmer groups according to different agendas. In further part, it owes to the feeling among project staff that it is not their duty proactively to organise integration and cooperation between projects. This is the task of MAFF and Sida.

The same situation applies, in an even more pronounced manner, in the matter in integration and coordination between projects supported by different donors.

MAFF have a difficult task in ensuring proper integration in the field. In the experience of the Evaluation Team, District MAFF teams are best at keeping donor-projects and NGO activities apart (i.e. avoiding geographical overlap), and in standardising the percentage contributions of beneficiaries to various local jointly-funded ventures.

But there are two further areas of integration and coordination which receive less attention. The first is the question of gaps in project-assisted service coverage within the District. The second is the possibility that various GRZ programme, project and NGO activities within a single District could be adapted to one another's programmes in a way which provides a more consistent and much better (i.e. a properly integrated) service for the people of the District. While, in our view, District GRZ staff could and should take more proactive roles in integration of this type, it has to be recognised that their tasks are far from easy. Most donor-sponsored projects are designed according to quite rigid parameters. Once that rigid design has been accepted, it is very difficult to change. In turn, this means project staff (GRZ, donor and NGO) have to see their prime responsibility as the realisation, according to strict time schedules and budgets, of a pre-determined and unalterable list of actions. Thus, for project implementers, adaptation of projects in the interest of integration means (a) more time, which they frequently do not have, and (b) a change in the project design and/or coverage, which would involve major reappraisals by higher authorities in both GRZ and the donor offices. In this situation, achievement by MAFF District staff of effective coordination requires foresight and very strong leadership.

We have found that the problems above apply, in varying degrees, to all of the current Sida-sponsored projects. Generally, MAFF staff have not been encouraged to be proactive in coordination and integration.

In the view of the Evaluation Team, Sida can do three things to assist in creating better integration and coordination:

- (a) Design and preparation of new projects should be done in a participatory manner in the target areas concerned, and should involve all stakeholders. The key stakeholders are, of course, the people of the target area. But other important stakeholders are the implementers of ongoing projects and programmes in the area (i.e. the District authorities, including the MAFF District office, and the various project staff). The prime objective in project preparation thus becomes (a) an assessment of the development needs in the area, and how they are changing, (b) the parts being played by ongoing projects in that development process, (c) the identification of a place where the new project fits in, and (d) the establishment of a practical network of linkages between the beneficiaries and the various projects, including the new one.
- (b) During Project implementation, time and resources need to be allowed to monitor the modalities of integration adopted at the outset, the extent to which they are being achieved and any new opportunities for cooperation and integration.

- (c) Donor-supported projects should assist MAFF to develop its mandated coordinating role at all levels possible within the framework of a project, i.e. assist PACOs and DACOs in area-based projects, and provide carefully targeted support to PBB, MAFF HQ.

3.7 MAFF's financial management and planning capacity

The limited planning capacity of MAFF is seen as a critical constraint in the operation of any future agriculture sector programme. This has been discussed in Section 3.5 and is noted in Reference 151, pages 12 and 13. However, this is a constraint which, to some extent Sida is already addressing (through its support to PPB), and which can in the future be rectified by further support from Sida and possibly other donors. However, MAFF would have to be open to this suggestion and be willing to pursue a jointly agreed programme to rectify the deficiency as rapidly as possible. Careful arrangements will be needed to ensure these conditions apply.

Concerning financial management in MAFF FMU, late submission of audit reports continues to be a matter of serious concern (Reference 151, page 46). FMU staff interviewed during the mission indicated that a range of remedial measures is being brought into operation. To what extent these are likely to improve the situation is not known at this stage.

If it were envisaged that basket funding through MAFF FMU is to be a pre-condition of further Zambia – Sweden cooperation, the performance of MAFF FMU would indeed be a serious constraint. However, indications are that basket funding may not be insisted upon by GRZ in the future (Section 3.8.3). In such cases, Zambia and Sweden will have the freedom to negotiate financing agreements which are appropriate for individual projects.

3.8 The Present Situation in the Preparations for an ASIP Successor Programme and its Implications on a Sector-oriented Support to Agriculture by Sweden

3.8.1 Sector Programme Structure

In any such discussion, it is useful to have a clear definition of what a sector programme is. A World Bank view, shared in main content by many donors, lists six key provisions as follows (Reference 21, page 6):

- (a) it is sector-wide in scope, fully integrated, and covers both capital and recurrent expenditures,
- (b) it is based on a clear sector strategy and policy framework,
- (c) local stakeholders (direct beneficiaries, the private sector, government) are fully in charge,
- (d) all main donors sign on to the approach and participate in its financing,
- (e) implementation arrangements should, to the extent possible, be common to all donors,
- (f) local capacity, rather than long-term technical assistance, should be relied upon as much as possible.

3.8.2 Progress in the formulation of the ASIP Successor Programme

At this time (February 2001), Zambian stakeholders are in the middle of discussions which are intended to formulate a successor agriculture sector programme to ASIPI. At the centre of this is the new draft Agriculture Sector Policy, first circulated in May 2000.

This formulation process started on 15 September 2000, and the current target for completion is 30 June 2001. The formulation is seen (Reference 252, page 4) to comprise two main tasks:

- (i) Concept formulation: preparation of a logical framework at programme level,
- (ii) Programme formulation: preparation of detailed programme content.

The formulation includes the preparation of background reviews covering (1) an evaluation and stocktaking of ASIP1, (2) sector development strategy, (3) institutional analysis, (4) public expenditure, (5) farmer associations, trusts, associations and boards (Reference 252, pages 4 and 5). In addition, a national Poverty Reduction Strategy Study is being prepared with MAFF contribution.

The detailed programme formulation is seen to focus on the following defined components (Reference 252, pages 6 and 7): agri-business development strategy, land, rural micro-finance and input/output marketing, irrigation, extension (crops, livestock, fisheries, farm power), research, animal production and health, fisheries development, and seeds standards and multiplication.

The responsible bodies for the formulation are defined as:

- (a) An ASIP Successor Programme Formulation Committee (FORCOM), chaired by PS MAFF and comprising five members from MAFF, five from other ministries (Finance, Lands, Trade, Environment and Natural Resources, Energy and Water Development), two private sector representatives, and one each from ZNFU, the NGO Forum and Gender in Development.
- (b) Specialist committees. convened to discuss and agree on approaches and programme content within the component headings.

It is presumed these discussions will feed back into the draft policy document, enabling it to be finalised (although this is not specifically mentioned in Reference 252). Currently, we are informed that the Draft Agricultural Policy is being circulated to, and discussed by a wide range of stakeholders including the Provinces and Districts.

3.8.3 Comments on the Formulation Process

Events are moving fast in the formulation process. Section 3.8.2 is thus a “snapshot”, and will be out of date very quickly. This difficulty notwithstanding, there are some areas of comment and concern which should be borne in mind when considering any future Sida involvement in the Zambian agriculture sector.

On the positive side, it is considered right that the Zambian Agriculture Policy is being discussed and finalised at the same time as the ASIP Successor Programme formulation. The two are wholly interlinked.

Also on the positive side, the impression is gained (from the documents and from interviews with key persons involved in the formulation process) that Zambia would benefit in the future from a sector programme which allows greater flexibility in terms of donor participation. Implementation of ASIP1 came to be dominated by MAFF (Section 1.2), and there was a clear expectation that donors would contribute to basket funds unconditionally. Bi-lateral donors shied away, mainly because they were unconvinced that MAFF should be the main implementing agency, but also because MAFF Financial Management Unit lacked capacity to manage basket funds. Today, there seems to be a willingness in Zambia to consider a more flexible approach which would accommodate the conditions of support of the bi-lateral donors (which, in respect of agriculture at least, are not insurmountably different from those articulated in Zambia), and would allow flexibility concerning the channelling of donor funds.

At the same time, there are some important concerns:

- (a) the main concern centres on the manner in which the ASIP Successor Programme will be structured. In its present draft form, the Agriculture Policy commits itself to a classification of the technical fields to be addressed at too high a level in the framework. The consequences of this on ASIP 1 have been discussed in Section 1.2. The fear now is that this is going to happen again.

In this regard, the decision to undertake a national Poverty Reduction Strategy Study as part of the formulation is indeed welcome. It is presumed that study will analyse poverty, and, based on that analysis, will come up with recommendations concerning the part which can be played by the various sectors (health, education, infrastructure, agriculture, local government) in alleviating poverty. On the face of it, agricultural development seems to have great potential for alleviating poverty. But the question of how agricultural development can best be organised to alleviate poverty, and the relationship between agricultural development and development in other sectors, are not clear at all in the draft agricultural policy.

In logical framework terms, the Poverty Reduction Strategy Study could perform an essential function in defining (a) a Development Objective and (b) an Immediate Objective for the ASIP Successor Programme. Once these have been agreed, the logical sequence, in the view of the Evaluation team, is:

- (c) an articulation of the expected changes in the actions of Zambian farmers (which are likely to be quite widely different for different farmer groups)
- (d) based on (c), a listing of the technical and institutional measures which are needed to assist each of the farmer groups, and
- (e) based on (d), a listing of the appropriate institutions to implement those measures.

To move direct from (b) to (d) is jumping a step. To move direct from (b) to (e), as effectively happened in ASIP1, is jumping two steps. The fear that this might happen again now stems specifically from the fact that the draft Agriculture policy (Reference 251, Chapters 3 to 6) amounts to a classical listing of agricultural technical and institutional functions under headings which follow very closely the present departmental responsibilities of MAFF. The titles of the sub-components which are currently being discussed in the ASIP Successor Programme formulation (Section 3.8.2) suggests that a somewhat more strategic approach is being taken; this will no doubt be facilitated when the full implications of the various reviews are incorporated. At the same time, it is difficult to understand how these component discussions can proceed before the poverty study is completed, and its implications in terms of the actions which different groups of people can take to rid themselves of poverty through better farming (level (c) above), are known.

In this respect, the timing of the poverty study is unfortunate, simply because its output crucially determines the scope of discussions which are already in progress. To solve this situation may involve something of a “step backwards” in the formulation process. Given the defined time schedule, the concern is whether that step will be taken in practice. Clearly, these developments merit careful monitoring by Sida.

Two other concerns are relevant. In the preparation of ASIP1, MAFF was criticised for not involving the Provinces and Districts in programme formulation. In part this was a matter of the short-time allocated for the task, in part the view that the discussions which did occur were largely between public servants, and did not seriously involve the farmers and the private sector. The

Evaluation Team has not had time to evaluate how the current discussions outside Lusaka are going. It is recommended that Sida monitor these events over the coming months.

Finally, GRZ states clearly that agriculture development in the future is a matter for all stakeholders to decide – the farmers, private sector institutions and companies, NGOs, donors and government. Given this statement, it is not clear why government representatives are in such a large majority in FORCOM. Nor is it clear why all except one of the component discussions in the formulation have to be chaired by government. Again it is recommended that this situation and its consequences are monitored by Sida over the coming months.

3.8.4 Implications on the Scope for Sida to take on a Sector-support Approach

Comparing Sida's objectives and strategies for support with the characteristics of the sector programme approach (Section 3.8.1), it is considered that Sweden would have no objection *in principle* to any of the provisions (a) to (f). The question for Sida then focuses on the extent to which provisions (a) to (f) apply in practice now.

The main practical problems arise from provisions (b) and (c). In respect of (b), neither a clear policy nor an agriculture sector programme have yet been agreed. Further, there are concerns about whether the ASIP successor programme, once it has been finalised, will satisfy Sida's expectations (Section 3.8.3). In respect of (c), a major prize of any sector programme is its capacity to coordinate and integrate all activities within the agricultural sector. Government (MAFF) should play a critical role in that coordination. At present MAFF's capacity to do so is limited.

Timing at present is, of course, unfortunate. Planning for a new phase of Sida support, if so wished, has to proceed as soon as possible. In view of the above, options open to Sida are:

- (a) do not wait for the outcome of the present policy and programme discussions; proceed with Sida programme and project planning in a sector-oriented manner which will fit in with the national policy and programme frameworks when they are finally agreed;
- (b) wait for finalisation of the policy and the programme, and then
 - (b1) find that it coincides with Sida's expectations and "sign up"
 - (b2) find that it does not conform to Sida's expectations. In this event, the choices are:
 - (b21) pursue a Sida programme and planning in a sector-oriented manner which will fit in with a national programme eventually
 - (b22) suspend Sida projects in the short-term, and direct Sida support specifically to the resolution of (b2)
 - (b23) suspend Sida's involvement indefinitely

Among these options, and for reasons elaborated in Chapters 5 and 6, the Evaluation Team recommends that Sida should choose option (a).

Option (a) involves the preparation of a Sida agriculture sector programme, and, within that programme, a series of projects. Further, this planning task should be done in a participatory manner. In our view, it would be wrong to expect that all this planning will be completed, appraised and approved by 31 December 2001. In view of this, it is recommended that the projects which are due to be completed on that date be extended under the same terms until 31 December 2002.

3.9 Links between Different Stakeholders in the Agricultural Research Sector and Extension Services

A discussion of options for future linkages between agricultural research and extension bears directly on the future of the Sida programmes LMCF, CFU, MDSP and SHAPES. This is contained in Sections 5.5.2 and 5.5.3.

4 “Hot spots” for economic growth based on small-scale farming; Government and NGO projects and programmes with significant impact and/or catalytic effect on the development of the agricultural sector

4.1 General

The term “hot spot” is taken to embrace both technical and institutional innovations which either have had, are in the process of having, or (in the view of the Evaluation Team) are about to have profound impacts/catalytic effects on Zambia’s developing agricultural economy and the participation of small-holder farmers in it. This broad definition of “hot spot” notwithstanding, it is a welcome duty to report on a wide variety of “hot spots”, indicating that new concepts and approaches are currently very much in the fore in Zambia’s agriculture sector.

4.2 “Hot spot” agricultural commodities

There is much current interest in marketable export crops which command dollar prices. Paprika, cotton and coffee are currently Zambia’s best prospects.

Coffee grows best in the wetter north of the country where coffee production has been stimulated with World Bank assistance through coffee growers associations. At present most coffee is marketed through the Zambian Coffee Board which runs a processing plant in Kasama. At present, the Coffee Board has something quite close to a monopoly, and coffee production would probably benefit from some competition in processing and marketing.

Paprika is a relatively new crop with a buoyant international market. Paprika is currently dominated by two marketing companies, Cheetah Zambia and Bimzi, both operating through smallholder out-grower arrangements under which the companies provide seed, other inputs, transport to/from the farm gate, grading, processing, marketing and technical advice (in other words, everything except the land and the labour). In the immediate future, paprika seems a likely market to attract local contracting entrepreneurs or possibly farmer groups who could sell to the two big companies or could export direct in the form of dry bales. Obviously grading and quality are important issues under such arrangements.

Cotton currently commands good international prices. It is grown widely in Central Zambia. As in the case of paprika, cotton is dominated by large processing (ginning) and marketing companies, operating through out-grower schemes.

4.3 Crops for local and local-international markets

While international export crops are of obvious importance in the emergence and participation of smallholder farmers in a stronger Zambian agricultural economy, the potential for crop production for local and local-international markets should not be neglected. In the past, interest in local markets has been diluted by the perception that local markets, particularly in outlying areas, are too small to be worth bothering about. Recent studies, for example in Luapula Province (Ref 12, Annex 2) shows (a) that local informal market channels are widespread and active, and (b) that the limitations are frequently not the markets themselves, but other factors – lack of market informa-

tion, lack of experience in organising input supplies, production, processing, transport and marketing in a commercial manner, and poorly developed links between farmers, service-providers and marketeers. This draws attention to ways in which these constraints can be tackled.

4.4 Outgrower schemes

A further current “hot-spot” in Zambian agriculture is the concept of the smallholder outgrower scheme. In paprika, there is currently vigorous competition between the two processing and marketing companies. The NGO CLUSA is involved in facilitating farmers to grow and make money out of paprika. The CLUSA project has demonstrated that it is possible for a funding agency (USAID in this case), marketing/processing companies, an NGO and smallholder outgrowers to link and cooperate in a purely private sector context. In the process, CLUSA has provided some useful lesson material (e.g. avoid commitment to one processing/marketing company alone), and look to be able to provide more in the future (e.g. the viability of credit systems involving collective responsibility among farmers, and management of credit by a private sector company).

There have been other interesting recent developments in outgrower scheme models. In cotton, Dunavant have taken over most gins and schemes from which Lonrho withdrew in the late 1990s. Lonrho ran extension services, and a main reason for Lonrho’s withdrawal was the high cost of those services. Dunavant now operate a different so-called ‘Distributor’ system under which a single person takes responsibility for the seasonal loan. This person, the Distributor, organises the outgrowers. He/she is responsible for loan disbursement and recovery, and for the sourcing and provision of extension services. The Distributor is rewarded with substantial bonuses for high loan recovery rates. This model, currently in its early days, merits careful monitoring by Sida to evaluate whether it succeeds, and if so, whether it could be applicable to other farmers groups and other crops. (In Eastern Province, Dunavant has based its outgrower model on experience gained within EEOA. The EEOA District Coordinator in Katete has produced a methodology (contractual framework) for Dunavant outgrower schemes in that area).

In connection with outgrowers, side-selling is a “hot-spot”. Contractual law means little if farmers are allowed to break it, and competing companies are allowed to encourage them so to do. This is happening widely at present, and is clearly a matter in which Government can assist through the enforcement of legislation. GRZ action in enforcing legislation in the immediate future is suggested as a good indicator of GRZ’s commitment to the facilitation of private sector agricultural development.

Overall, outgrower schemes have benefited some small-scale farmers, most of them emergent commercial farmers along the line-of-rail. At the same time, the relationship between the farmers and the companies is on a purely seasonal basis, and the terms of the contract are dictated by the companies. This makes farmers vulnerable to fluctuations in prices. In addition, the outgrower system can lead to a dependency which prevents farmers moving on to a next stage in which they can negotiate prices and the terms of contract.

4.5 Agricultural Extension

Agricultural Extension is a “hot spot” (Section 3.4.3). Smallholder farmers in out-grower schemes which have links with large companies normally have access to separate extension services with limited focus on specific crops. For other small-scale farmers, the vast majority, the only available source of extension is MAFF Field Services. Regrettably, MAFF are having grave difficulties in maintaining an effective service (poor conditions, rapid staff turnover and up to 40 percent of stations unmanned in some parts of Zambia).

Some NGOs are experimenting with alternative forms of providing agricultural extension, in some cases operating their own extension agents, in others through the secondment of extension agents from MAFF (CLUSA, PAM, CARE, World Vision).

Overall, there appears to be a general acceptance that both the MAFF system and channels other than MAFF Field Services should be pursued. This is reflected in the draft National Agricultural Policy (Reference 251, pages 12 and 13) which states that extension will be provided by MAFF Field Services, farmer groups, the private sector and NGOs. In contrast, a transition to other forms is specifically recommended in DSI (Reference 3, pages 2 and 13) whose authors see extension as something in which MAFF should refrain from operational responsibilities and should specialise in monitoring and evaluation. While this latter approach may be appropriate as a long-term aim, it is clear that farmer groups, NGOs and the private sector are not yet in a position to offer tested sustainable extension models, or the national-wide services which MAFF Field Services are trying to provide. Nor are small-scale farmers yet capable of paying the full cost of extension. For the time being at least, demand-driven extension still has to be subsidised from public sources.

A special point of interest within agricultural extension was an apparent acceptance by MAFF in 1999 of the participatory extension approach (PEA). This followed several years pioneering of the PEA approach (inter alia by GTZ ASSP in Southern Province, and LLFSP in Luapula Province). This change has since been reflected in a Pilot Training Project for MAFF staff in 20 Districts (sponsored by World Bank). This development is directly relevant to Sida's current fields of interest in Zambia, particularly in respect of LMCF and MDSP (Annexes 2 and 3). Strangely though, the PEA has not yet been expressly accepted by MAFF as its official policy (Reference 25X, page 1), and there is no mention of PEA in the draft Agricultural Policy (Reference 251).

4.6 Institutional “hot spot”: decentralisation and democratic local government

Zambia is currently a long way behind some neighbouring countries in this regard (e.g. Tanzania where a history of “villagisation” has led naturally to decentralised local government). In Zambia, no implementing regulations for decentralised government have been agreed. This means decentralisation has proceeded in a largely haphazard manner, with different line ministries decentralising in different ways. Before 2000, the highest authority at District level was the District Council whose wishes and decisions were implemented through its Secretary. Since then there has been confusion stemming from appointment by central government of District Administrators and the assumption of the District coordinating role by DDCCs (Section 3.3.4). These steps have further polarised local democratic processes along national party political lines (even more than they were in the District Councils), effectively blocking the emergence of local democracy. Further, national government has steadily eroded the powers of District Councils to generate funds. This means District Councils have little or no spending money of their own, and can only bring their influence to bear on local investment through the District line ministry budgets.

“Hot spots” locations in this difficult situation are the Districts of Petauke and Mazabuka. In Petauke (one of the Districts in which EEOA has been active for six years), local democracy has been strengthened through capacity building in the District Council and the creation of elected Area Development Councils within the District. These processes are being facilitated by an ongoing UNDP Governance Programme. In Petauke, this structure has embraced EEOA, strengthening it significantly in terms of its long-term institutional sustainability.

In Mazabuka, a completely different approach is being tried whereby the District Council has taken upon itself the rights and responsibilities of a private business in order to generate funds. The legal grounding and implications of the arrangement at Mazabuka are not known. However, it is recommended that both Mazabuka and Petauke are investigated further during any future planning for Sida-support.

4.7 Methodological “hot spot”: training in farming as a business

This matter concerns the fact that the capacity of small-scale farmers to participate in liberalised agricultural market economy is frequently limited by their lack of knowledge of how to run a farm or a group of farms as a business. At least five projects are now directly concerned with training farmers in these subjects (ZNFU/NORAD, EEOA/Sida, CLUSA/USAID, ASSP/GTZ and ZNFU/Swedish Cooperative Society). Among these there are some quite wide variations in (a) target for training (farmer’s groups, MAFF staff), (b) the training approaches and manuals used, and (c) the manner in which farmers and farmers groups are linked to private sector service providers and markets.

4.8 Methodological “hot spot”: a project or a facility

This “hot-spot” concerns the creation and sustaining of local management and organisational capacity through a project implementing facility. Conventional project preparation in a participatory manner follows the sequence:

- (a) agreement by agency and government on a broad definition of project scope, i.e. the Development Objective and a draft Immediate Objective,
- (b) participatory planning with all stakeholders to arrive at a refined, commonly agreed Immediate Objective, Outputs and Activities.

The alternative “facility” approach follows the same sequence, but it stops at the Output level. Instead of trying to predict what each and every Activity will be, it concentrates on the establishment of a local facility (e.g. a Development Board) which is trained and equipped to make the choice of Activities itself.

This type of approach has three advantages:

- (a) Choosing of Activities during implementation means there is a genuine capacity to react to a demand-driven situation. This encourages farmers to discuss their needs and articulate those demands. If it is decided at the outset that an intervention has, for the sake of sustainability, to be driven by the demand of the beneficiaries, those Activities have to be related directly to that demand. Under the conventional approach, project planners have the doubtful task of having to guess which activities are going to be demanded. Following the “facility” approach, the Activities are defined as the intervention proceeds, the scope of those Activities being defined by the Outputs. This is clearly relevant to interventions which are related to markets for agricultural products because those markets are, by definition, unpredictable. But it also has relevance to broader interventions with social and welfare components, on the grounds that sustainability and a better future for poor people comes from an agreement among them about what they can do to improve their situations, and a demand from a “facility” to assist them in that process.
- (b) The facility involves the creation of a sustainable, local institution for the channelling of donor funds to the beneficiaries. If it is established in an appropriate manner, the facility will be sustain-

nable after the intervention has ceased. It will be able, both during the supported term and after it, to manage funds forwarded by any agency.

- (c) The fact that a facility reacts to a demand from beneficiaries means that the assistance can be tailored specifically to that demand. This means a facility can achieve value for money. Value for money is not simply a matter of value for the funding agency (although it is of course important in that respect). Value for money is more important to the beneficiary groups who, through the intervention, become aware that services can be demanded and provided on a value for money basis following a transparent democratic process of which they have become part.

Of course, there are risks involved in the “facility” approach. Care is needed in establishing an appropriate “facility” management which ensures that effort and funds are channelled in the intended directions. Transparency and democratic action are essential throughout. Further, it is of key importance that the management of a facility is done by people who are concerned with the fields which that facility is intended to cover. A facility which is created for provision of social services (for which Government has a major element of responsibility) may have a management which includes, but is not dominated by, government representatives. A facility which is created for the facilitation of private sector business (including any form of farming for money) is essentially a matter for the private sector. Government should not be involved.

It should be noted that a facility of the type described above would not need to be all-encompassing in scope. Indeed, the matter of which fields it would cover depends on a wide range of circumstances, all of which would need careful consideration at the outset. Once the scope has been defined, a facility Board would be appointed, with Board members having common interests and experience of development within the defined scope. In turn, the Board members would prepare guidelines for matters to be addressed (and not to be addressed) by the facility.

The “facility” approach has not yet been tried widely in Zambia. Two current proposals for “facilities” exist in References 3A and 12. In 2000, a Western Province Development Board was constituted which parallels some of the functions of a “facility” management. One “facility” is currently operating in the form of the cooperation between ZNFU and the Swedish Cooperative Societies. Under this small but significant project, ZNFU acts as the “facility”, recording the demands of farmers. As dictated by that demand, ZNFU contracts farmer trainers and/or links farmers with key service providers. As part of its nationwide responsibility, ZNFU also provides farmers with market information. Services are thus provided on a value for money basis, and the Swedish Cooperative Society trusts ZNFU to manage the “facility” appropriately.

4.9 “Hot-spot” institutions: the Agriculture Consultative Forum

Dating from 1998, the Agriculture Consultative Forum (ACF) comprises representatives from the private sector (the Agri-business Forum), NGOs, ZNFU, private/public partnerships, donors and government. ACF’s main tasks are (a) to facilitate consultations among stakeholders, (b) to advise on agricultural policy, and (c) to develop and review the principles which govern the actions of stakeholders in the agriculture sector.

ACF and its staff have played major roles in facilitating and progressing a range of key issues, chief among them the establishment of a consultative base for the new Agricultural policy and a successor programme to ASIP1.

4.10 “Hot-spot” institutions: the Agro-based NGO Forum

The Agro-based NGO Forum is a new organisation. Its creation stems from a rapid expansion in the numbers and scope of Zambian agriculture-based NGOs over the last ten years. Some years ago, such NGOs were regarded with some suspicion by both GRZ and donors. Now some of them have gained substantial experience in grass-roots operation, capacity building and facilitation, and have demonstrated they give value for money. It will not be long before they are competing for full project management tasks. Recently, donors (including Sida) have started to invite competitive tenders from NGOs. Programme Against Malnutrition (PAM) is currently mandated with the coordination of the Agro-based NGO Forum.

We consider the key place for NGOs in the future is as implementing partners in service provision, in respect of which they should give value for money through competitive bidding. Today, there are enough of them for this to be done. Currently, NGOs do not have a place as farmer representative organisations.

4.11 “Hot-spot” institutions: the Partnership Forum

The Partnership Forum is a forum of Zambian businesses based in Lusaka. It is an informal voluntary organisation whose objective is to link potential business partners for the betterment of economic development and employment in Zambia. The four key executive partners of the Forum work for international or national companies/institutions in Zambia. These companies/institutions allocate the time of the executives and some operational and office services as their contributions.

Inter alia, the Partnership Forum has brokered an experimental arrangement between farmers (producers), Zamseed (seed supply and farmer training), MAFF and NGOs (both farmer training) and the supermarket outlet Shoprite in Chipata for the production and sale of vegetables. People in Zambia have come to wonder why its largest supermarket chain needs to import such a large percentage of its vegetables. For Shoprite, the major concerns are quality of product and consistency of supply. For many years, Shoprite made little or no effort to involve Zambian smallholder farmers as producers for their chain. Starting in 2000, Shoprite agreed to participate in the venture on an experimental basis. It is considered the Forum may be of future interest to Sida generally, and to EEOA in particular.

4.12 Production of organic crops

In the last few years there has been increasing interest in production of organic crops, principally for export. To date, most activity in this field has been among commercial farmers in the area close to Lusaka International Airport. In the future there may be potential for involvement of smallholder farmers, either in their own right or as outgrowers. Production of organic crops is currently being facilitated by the Lusaka-based Organic Producers Association of Zambia. Any future preparation mission should discuss options for involvement of smallholder farmers in organic farming with OPRAZ.

4.13 Suggestion for monitoring of “hot spots”

Given that this report was compiled over a period of only four weeks, it is likely that some “hot spots” have been missed. It is recommended that Sida in the future maintains a regularly updated register of “hot spots”, for which this section may provide a foundation. This would be used as a key reference, both in future Sida programme and project planning, and in subsequent monitoring.

5 Arguments for Continuing Sida Support for Zambian Agriculture

In Section 3.8.4, we recommend that Sida should not wait for the outcome of the present policy and programme discussions. Instead, Sida should proceed with programme and project planning in a sector-oriented manner which will fit in with the national policy and programme frameworks when they are finally agreed.

This Chapter summarises the arguments for this approach.

5.1 The Relevance of Existing Sida Project Experience to Priority Problems in the Agriculture Sector

We conclude that the achievements and experience gained in all six current are thus relevant:

- (a) EEOA has developed appropriate approaches which have achieved substantial positive impact (Annex 1). It has been implemented in a context which conforms to a key expectation of a Zambian agriculture sector programme, i.e. the empowerment of the small-scale farmer to participate in the free-market economy. Through its focus on training people to run their enterprises as businesses, it has bridged one of the key gaps in knowledge (Section 4.7). In so doing, it has started at the right level, in the communities and Districts. Further, EEOA has, through its participatory methodology, contributed to good governance at the District and community levels, and has done much to promote a practical balance of gender at these levels.

As yet, it is not wholly clear whether an EEOA input of six years per target District is sustainable. (This view was advanced during the mission by EEOA staff, and is endorsed by the mission). However, given the positive achievements and indications to date, there is a strong case for continuation of the EEOA model, developing it to favour sustainability. In the EEOA context, sustainability means the achievement of a critical mass of people in outlying areas with new capabilities who are able to explore new economic opportunities on their own, and whose economic activities will create economic opportunities for other people in the same outlying areas.

- (b) Section 3.4.3 has described the major potential of conservation farming techniques to solve important production problems currently being faced by Zambian smallholder farmers, and the urgent need to explore sustainable methods of enabling smallholder farmers to put those techniques into practice. Swedish/Zambian cooperation, in the form of linked support to SCAFE/LMCF and CFU, has built up a very substantial pool of practical experience in these fields (Annex 2). Sida is, therefore, in a strong position to sustain its support for these developments at a time when they are in critical demand.
- (c) MDSP was predicated on the understanding that farming families could do more to address their current problems of food insecurity if they were to concentrate on food crops other than maize before MDSP; adapted, high-yielding seed and planting materials for such crops had been developed, but were not being multiplied or distributed to smallholder farmers.

MDSP (and latterly, SHAPES) have demonstrated that the initial problem and the implied solution were valid then, and are still valid today. Further, MDSP and SHAPES have started to demonstrate that practical solutions can be achieved in their target areas (Annex 3). Several new smallholder growers now know how to produce improved seed and planting materials, and levels of sales for

many of the crops indicate that benefits are already accruing, both to the producers and to the purchasing farmers. As yet, it cannot be claimed that MDSP and SHAPES are sustainable. In particular, Seed Growers' Associations are still in their infancy and need further support. However, indications to date are positive, meaning Sida is well placed to continue its support in this important field.

Summarising the implications of (a), (b) and (c), the projects within the current Sida programme are all addressing crucial problems which affected the Zambian agriculture sector when they were designed, and they still affect it now. This does not mean that all of the current Sida programmes should be continued in their present forms. Rather, it means that the severance in December 2001 of Zambian – Swedish cooperation in the fields in which they are being applied (development of largely agriculture-based businesses, better farming practices for increased yields, and better seed and planting material supplies of important food crops) would be counter-productive and would be wrong.

5.2 An Opportunity for Sida to Assist in the Practical Furtherance of the Sector Approach in Zambian Agriculture

Over and above the argument in Section 4.1, there is a further *a priori* case for the continuation of Zambian – Swedish cooperation in the agriculture sector

In Section 3.8.4, it is argued that Sida should proceed now with programme and project planning for a new phase of agriculture sector support, and should not wait for the outcome of the present policy and programme discussions. However, the fact remains that the development and implementation of a workable sector programme is currently the single most pressing management issue in Zambian agriculture. If Sida wishes to continue its support for agriculture in Zambia, we consider it is obliged to do so in a manner which assists Zambia in developing that workable national agriculture sector programme. There are two ways in which Sida-sponsored projects could do this,

- (i) The first concerns the provision of direct support to MAFF in key fields which clearly require assistance if MAFF is going to facilitate the implementation of a new agriculture sector programme, i.e. planning, monitoring, evaluation and overall management.

Over the coming months, this assistance should focus on helping MAFF and other stakeholders to complete the discussions on the new agricultural policy and reach agreements on the content of the new agricultural sector programme. Sida is already doing this to some extent through its support to MAFF, Policy and Planning Branch (PPB). And Sida-sponsored project staff (especially LMCF staff) have been actively involved in this process.

Once the new agriculture policy and programme are finalised, Sida could usefully provide further capacity-building support to MAFF in the planning, monitoring, evaluation and overall management of the programme's implementation. The provision of support at that stage would clearly be contingent on MAFF's willingness to adopt it in a form which will make it effective. In addition, there is a possibility (hopefully an unlikely one, but still a possibility) that the new policy and sector programme will turn out to be invalid and/or impractical in Sida's view. We consider Sida should protect itself against this risk by insisting on the adoption of a workable agricultural policy and sector programme as a condition of future support to PPB.

- (ii) The second way is to orient all future Sida-sponsored assistance in a form which conforms to Zambian agriculture policy and to the principles of sector programming. In other words, future Swedish support for Zambian agriculture should be in the form of a Swedish-sponsored programme which is *properly integrated and internally consistent*, and which accords to the maximum extent possible with national agricultural policy.

In summary, approach (i) would assist, now in progressing the policy and programme discussions, and later in putting them into practice. Approach (ii) would provide a much needed practical demonstration that a sector approach can be followed which can effectively tackle Zambia's most urgent need in the agriculture sector, i.e. the betterment of small-scale farmers' livelihoods under a free market regime.

The potential value of this demonstration is emphasised. As noted in Chapters 3 and 4, one of the key stumbling blocks in the discussions towards an agriculture sector programme in a free market context has been the perception by some that the market for crops in rural areas is tiny and has little potential to expand; even if markets were to expand, rural roads are too bad for smallholder farmers to gain access to inputs and the market. These arguments have been used to argue the case for the perpetuation of substantial MAFF involvement in smallholder farming, largely on social grounds.

A range of projects over the last five years has begun to demonstrate (a) that some of these problems are largely myths, and (b) the problems which are not myths can be addressed directly and effectively at the grass-roots level without the involvement of MAFF in a central *implementing* role. Sida support (especially through EEOA) has played a significant role in (a) and (b). In the view of the Evaluation Team, it is most important that this role is sustained now.

The need for internal consistency within a Sida-supported programme does not mean that a programme should cover the whole agriculture sector. What it does mean, however, is that Sweden's support should assist MAFF to progress in all practical measures the ongoing transfer of responsibility for implementation of agricultural development to the private sector (including NGOs). In some fields, extension for example, it is accepted that this transfer process will take a considerable time to achieve, and that support is needed now for both public sector and private sector involvement. The Evaluation Team supports this view. What would be mistake, however, would be to lock any future support for extension into either the public sector alone, or the private sector alone.

5.3 Present Levels of Consistency within the Sida-sponsored Projects

The Evaluation Team has gained the overall impression that Sida's six current agriculture sector projects, while they are relevant and have been successful in many respects, have emerged separately, with the concept and mode of implementation in each project being based on different backgrounds. In consequence, they have adopted quite widely different approaches in project design and style of implementation (Reference 109).

To some extent, it is possible to justify these different approaches on the grounds of experimentation. However, the fact remains that six years of EEOA and fourteen years of SCAFE and LMCF amount to very long periods for experimentation alone.

The Team's view (for reasons given in Section 5.2) is that the time is now right for Sida to opt for an internally consistent programme which (i) conforms as far as possible to GRZ policy for agriculture, (ii) incorporates the positive aspects of project experience to date, and (iii) excludes the aspects of project experience which have turned out to be impractical or unsustainable.

Experimentation can and should continue, especially in the strengthening of non-governmental involvement in agricultural development and local farmers' organisations. In respect of (ii) and (iii) above, positive and negative aspects should be deduced both from Sida projects and from other agriculture sector projects in Zambia (especially CLUSA, CARE Livingstone, Netherlands involvement in Western Province, MFA Finland in Luapula, ASSP Southern Province (GTZ), RIF and others).

6 Suggestions for the Future of Sida Support for Agriculture in Zambia

6.1 Outline of a Programme Framework for Swedish Assistance in the Agriculture Sector

6.1.1 General

Given that the Zambian agricultural policy is not yet finalised, the first step for Zambia and Sida is to devise for themselves a provisional agriculture sector programme framework and logical framework which conforms to the main principles of agricultural policy currently being expressed. This is a task for a programme/project preparation mission which, if Zambia and Sida so wish, could be mobilised in the immediate future. We include here our suggestions to illustrate the basis on which such a preparation might proceed.

6.1.2 A Possible Programme Development Objective

We consider the provisional Zambia – Sida agriculture sector programme framework should centre on the Zambian farmer, with all narrative entries at Development Objective, Immediate Objective and Output levels chosen directly to reflect changes in the actions of Zambian farmers (and not changes in the carrying capacity of land or other resources to produce agricultural crops). There should be no reference to any implementing institution in the provisional agriculture sector programme framework. These should be defined out in the project frameworks, at Activity level.

Within this programme framework, it is logical that the Development Objective should reflect the changes in rural people which relate to actions both in agriculture, and in sectors other than agriculture. An appropriate narrative might be *“Zambian rural people have achieved better livelihoods”*. This serves a key purpose of any Development Objective, i.e. it reminds the farmer beneficiaries and the people who are working in agriculture sector development that there are things other than agricultural development which rural people need to improve their lives. These may include access to democratic channels of governance, capacity for grass-roots organisation, good health, good education and reasonable infrastructure. Further, the expression thus of the Development Objective reminds everybody that the best possible programme or project for improved farming will not achieve better livelihoods for people if any of these other external factors are limiting. This means the external factors become Assumptions in the achievement of better livelihoods from an agriculture sector programme.

As with all such Assumptions, the next step is to investigate whether the various external factors are, in practice, limiting for all or part of the target group. If they are not limiting, the external factors may be deleted as Assumptions. If any external factor is found to be limiting, the next step is to find out whether that factor is being addressed concurrently, in sufficient measure and in the same geographical area by programmes in other sectors. If that is the case, the Assumption becomes the successful concurrent completion of that programme. If it is not the case, the choice is (a) to amend the target group so that the section of that group to which the external factor applies is excluded, or (b) to expand the programme to include the limiting factor.

6.1.3 A Possible Programme Immediate Objective

The Immediate Objective of an agriculture sector programme framework should define in a single narrative entry what Zambian farmers will be doing after the implementation of the programme which they were not doing beforehand. An appropriate narrative may be *“Zambian farmers have achieved substantial, sustainable food security and increased incomes from agriculture”*.

6.1.4 Possible Programme Outputs

There is wide variation in the circumstances of Zambian farmers. Some are already involved in commercial farming. Others have the skills and motivation to participate in commercial farming, but are held back from so doing by a range of constraints. For others, the prime concern in farming is to grow enough to feed their families and themselves. Within this last group, some farming families may constitute a sufficient and healthy family labour force, for whom the main limitation is knowledge and experience of farming. Such farmers may be described as “vulnerable but viable”. For other families, the problems of chronic ill-health may mean that their members have no time or energy to take on new agricultural practices, however appropriate or potentially benefiting they may be. This last group includes many single-parent families, and families whose members are suffering from HIV/AIDS.

From the above discussion, it becomes plain that different approaches are required for different target groups. Put in a different way, any programme or project which attempts to apply a single menu of interventions for all farmers is bound to experience widely differing results, perhaps ranging from substantial success to zero impact. Therefore, at the next level below the Immediate Objective, i.e. at Result level, it is logical that the agriculture sector programme framework should distinguish between these groups.

Narratives at Result level in the programme framework would then be “*Zambian farmers [whose present circumstances are] have achieved substantial, sustainable food security and increased incomes from agriculture*” with the passage in square brackets tailored to reflect the various target groups among farmers.

Figure 6.1 is a possible programme logframe, prepared along the lines explained in Sections 6.1.2, 6.1.3 and 6.1.4. It will be noted that it reaches down to Result level without reference to any particular agricultural technology or range of inputs. Nor is any implementing body mentioned.

Figure 6.1 A Possible Logframe for a Zambia – Sweden Agriculture Sector Programme

NARRATIVE	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
Development Objective Zambian rural people have achieved better livelihoods			
Immediate Objective Zambian farmers have achieved substantial sustainable food security and increased incomes from agriculture			
Results 1 Zambian established commercial farmers have achieved substantial sustainable food security and increased incomes from agriculture			
2 Zambian emergent commercial farmers have achieved substantial sustainable food security and increased incomes from agriculture			
3 Zambian vulnerable but viable farmers have achieved substantial sustainable food security and increased incomes from agriculture			
4 Zambian non-viable farmers have achieved substantial sustainable food security and increased incomes from agriculture			

6.2 The Application of Strategic Choices

A Strategic choice has to be made at any level of a programme or project planning framework which involves more than one option. For example, if the Immediate Objective is articulated as a single entry (as is conventional), the strategic choice first applies at the next level below, i.e. at Result level.

A strategic choice is the selection of one or more of the Results which are actually going to be addressed. In other words, the strategic choice always lies within the range of options covered together by the Results.

Strategic choices may be made on a variety of grounds. These include social criteria (for example, one target group of farmers is more socially deserving than another), on technical grounds (for example, appropriate technology is more readily available in one area than another), or on financial grounds (limitations in funds means it is impossible to progress in all geographical areas and on technical all fronts simultaneously; priority areas or fields have to be selected, and other areas or fields may have to be shelved for the time being). In addition, further, important strategic choices frequently have to be made in cases where other programmes are already addressing issues within the scope of the Results. In all cases, the strategic choice and the reasons for making it are key elements in the rationale of any system of programmes and projects.

As it happens Sida are, at this moment, faced with the need to make two strategic choices at two different levels.

6.3 A Strategic Choice for the Long-term

The first of these concerns Zambia's and Sida's view of their long-term strategy in the Zambian agriculture sector, the target groups and geographic areas to be covered. Based on our knowledge of Sida's policies for development assistance, one possible strategic choice might be:

“Zambia and Sida choose to support farmer target groups in Results 2, 3 and 4 in outlying areas of Zambia.”

on the grounds that

- It is Sida policy to channel support towards poor people. Established commercial farmers should not be targeted because they are sufficiently well-off to look after themselves.
- It is Zambian and Sida policy that Swedish support should be concentrated in outlying areas because Zambian farmers along the line-of-rail have generally more opportunities for economic development, and are already being supported by other projects (ZNFU/NORAD, CLUSA, ASSP/GTZ, etc).

The actual choice and its justification are, of course, matters to be pursued during programme and project preparation, and the items above are suggested as possibilities only. However, it is worth noting now that the inclusion of non-viable farmers (Result 4) represents something of a departure from Sida's main emphasis in its current projects.

6.4 A Strategic Choice for the Short-term

The decision to proceed with the preparation of a separate agricultural sector programme for Zambian – Sida is proposed for valid reasons (Sections 5.1 and 5.2). However, it has to be seen as a short-term provisional measure. It looks ahead to the time, hopefully not too distant, when a workable Zambian agricultural sector programme has been agreed.

In this situation, it seems to us wise to make a second provisional strategic choice *within the scope of the first*, which might be

“Until such time as the national agriculture policy and sector programme are finalised, Zambia and Sida choose to support farmer target groups in Results 2 and 3 in outlying areas of Zambia, to concentrate on the technical fields covered by the six current Sida-sponsored projects, and not to branch out into new technical areas.”

on the additional grounds that

- It is not wise to break out into new fields within a separate sector programming approach when there is a good chance that a workable Zambian agriculture sector policy and sector programme will be finalised in the not too distant future.
- All six current Sida-sponsored projects are addressing priority fields in the agriculture sector, and have substantial experience in those fields (Section 5.1).
- Continuity of effort is important, it would be wrong to suspend the projects for any time if that can be avoided.

6.5 Suggestions for Future Project Planning

Within the parameters defined by the strategic choices defined above, it is now possible to make suggestions which could be taken into account in the planning for future projects.

6.5.1 A Project Aimed at Further Economic Expansion

In its present form, EEOA conforms to the strategic choices above, and we see an important future for a Sida-supported project of this type.

In EEOA, the aim was to build up capacity in target Districts to the point where the beneficiaries could sustain economic growth on their own. A target of six years was adopted. Four Districts have now received EEOA support for six years. However there are doubts whether the capacities developed there are sustainable (Annex 1). Because of this, it is not yet justifiable to expand the EEOA model on a wide (e.g. nationwide) scale. At the same time, achievements in the four Districts have been substantial, and it would be wrong to bar entirely a new economic expansion project from starting up activities in new Districts. We therefore suggest over a period of four years:

- (a) commencement of operations in four new Districts, following the basic EEOA procedures already established, but taking into the account the suggestions of the Follow-up Mission and this Evaluation Team,
- (b) completion of ongoing work in Chadiza and Isoka Districts, and
- (c) implementation on an experimental basis of different phase-out strategies in the four Districts which have received nearly six years' support: Mpika, Chinsali, Petauke and Katete Districts.

It is for a future preparation mission to facilitate, with all stakeholders, the decisions concerning which Districts should be selected as new targets in (a), and the four phase-out strategies to be chosen in (c).

Concerning the phase-out strategies, obviously sustainability is the main criterion. During the evaluation, it was noted that EEOA in its present form seems not to have explored to the full the possibilities of developing linkages between the project beneficiaries and some key institutions. One such set of linkages are those between EEOA beneficiaries and the District Councils, Area Development Committees and other community decision-making institutions. These linkages appear to have developed to a much greater extent in Petauke District, a situation which probably owes to the presence in Petauke of a supporting UNDP Governance Project. Careful monitoring would reveal the part played by these institutional links in Petauke, and the actual impact they are having on sustainability of the EEOA effort. If the Petauke model were to prove clearly the more sustainable, attention could then be focused on whether EEOA should include local government strengthening within its brief, or should entrust it to other development agencies.

We suggest stronger linkages may also be required between EEOA beneficiaries and private sector markets and service-providers. This is something which could be addressed through the creation of District Development Alliances or “Facilities” (Section 4.8 and References 3A and 12).

The experimental nature of the phase-out programme is emphasised. To be statistically valid, it needs at least one “control” District from which all support should be withdrawn at the end of the six year term. Having discussed options widely with all partners in Zambia, we consider it would be wrong to terminate operations completely in any of the four Districts which are presently nearing their six-year term. Given that there are specific doubts about sustainability (as noted above), complete withdrawal would come close to sacrificing a District in the interests of experimentation. We therefore suggest an alternative approach in which either or both of the Districts which have been supported for two years (Isoka and Chadiza Districts) would be further pursued for the remainder of their six-year terms, and support would then cease completely. This approach gives better chances of achieving sustainability because the work in Isoka and Chadiza has been done in the light of lessons learned in the first four Districts.

The potential value of the experiment is also emphasised. If a demonstrably beneficial and sustainable model can be found after a further four years, there should then be a good case for its widespread duplication in Zambia.

6.5.2 A Project Aimed at Assisting Smallholder Farmers to Achieve Higher Levels of Productivity

Our view of the changing situation in agricultural extension is given in Section 3.4.3. The key issue concerning the future appears to be the fact that new techniques (the conservation farming group) are available which can confidently be expected to assist the large group of vulnerable and viable smallholder farmers to provide themselves with more secure supplies of food. The conservation farming group of techniques may also be applicable to farmers who are currently non-viable, and to emergent commercial farmers.

Unfortunately, there is presently a shortage across the board in capacity to extend the new conservation farming group of techniques to farmers. Presently, MAFF Field Services has by far the best network, but there is still a great deal of training to be done before Extension Agents can be said to be properly equipped to advise farmers on the full range of variations within conservation farming. In addition, even if training is stepped up substantially, rapid turnover of Extension Agents can be expected to continue as long as their present meagre salary levels remain in force (Reference 151, page 35). Some NGOs operate extension services outside the public sector. By their accounts, they have achieved some measure of success in adoption rates and increased yields. However, the numbers of farmers supported by NGOs in this manner remain very few. In addition, NGOs are not able, as yet, to present clear evidence that the benefits accruing from their mode of extension (almost always greater in staff and running costs than the MAFF model) can be covered by the extra productivity which they claim to have engendered among farmers.

Clearly there is great pressure to extend the conservation farming techniques as widely and rapidly as possible. At the same time, it is considered the option of doing this now, when both public and private sector are ill equipped, is bound to be unproductive and wasteful. Rather, effort in the immediate future should be focussed on the development, again as rapidly as possible, of effective and cheap methods of agricultural extension. Once these are established, then is the time for widespread replication.

Thus, we see a future for Sida-supported involvement to focus over the next four years on carefully directed experimentation, trying out various methods to find out (a) which methods are effective, and (b) among those, which can be put into effect at minimum cost.

The need for effectiveness and low costs focuses attention on the future roles of lead farmers and farmer groups who, with suitable training and organisation, could take over the main tasks of grass roots extension which are presently being demanded of the Extension Agent. This in turn means that a new project, experimenting in the means of providing services for the achievement of higher productivity among smallholder farmers, needs to be farmer-centred throughout. This obliges a new project to be equipped in terms of expertise to provide support, not just in the fields of conservation farming and related techniques, but also in the fields of farmer and farmer-group capacity development. Whatever approaches are tried in the experimental programme, impact should always be measured in terms of incremental yield benefits achieved, tracing these to the techniques adopted and to the circumstances of farming families (for example, labour availability, food security status, membership of farmer group) in stratified sample surveys.

Within a future project, important links between crop research and crop extension should be tried and tested. One possible means of doing this would be through a special research and development fund, run by a board of stakeholders and containing envelopes for different types of research, technique adaptation and testing. Sida or any of the donors could support a fund of this type. A second option could be the development of new demonstration facilities, which could include demonstrations and advice services provided by CFU, MAFF Extension, MAFF crop research, ZAMSEED, various NGOs and possibly even the various large commercial crop companies. Farmers would visit the demonstration and choose the options which they need. The demonstration facility could be run by an elected Board of stakeholders. The Board would have access to donor funds which it could use to subsidise provision of selected services to resource poor farmers. Better off farmers could be charged for services on a non-profit making basis.

The detailed structure of any future Sida-sponsored experimental programme in this field should be devised during a future planning phase. In that planning, the following suggestions may be relevant:

- If Zambia and Sweden accept the strategic choice in Section 6.3, the geographical emphasis should be on outlying areas
- Experiments in service provision should include a range of service provision modalities and should involve both public and private sector services
- The programme should take full account of all ongoing and new support in the crop and livestock extension field throughout Zambia. This would mean visits and a network of dialogue between key programmes and projects, during both the planning and implementation.
- In selecting the number and distribution of target Districts under a new project, the planning discussions should focus first on the requirements for a successful experimentation programme.
- Synergy between projects operating concurrently in the same area is a vital element to be examined in the experimental programme (Reference 151, page 8). To be valid in an experimental context, the programme should, within selected Districts, include combinations of different extension service types and different settings in respect of the activities of other projects, (e.g. extension type aaa plus economic expansion, extension type aaa plus seed multiplication, extension type aaa without either of these, extension type bbb with economic expansion,....etc). These combinations should not be confined to links with Sida-sponsored projects. Links with other projects should be included in the experiment if they are appropriate.

- In choosing target Districts, we consider the interface with a future economic expansion project to be worthy of special emphasis. Among their beneficiaries, EEOA appears to have raised awareness of business opportunities and their capacity to exploit them through increased crop production and marketing. In such a situation, one would expect there to be a greater demand for effective extension from people who see it as an essential service for their businesses and would therefore be willing to pay for it. This enhances the scope for achieving cost-effective solutions in extension provision.
- The number of Districts to be included in the new project should be decided first and foremost by the requirements of a successful experimentation programme. At present LMCF are operating in twenty Districts (Table 6.1). In order to complete the experimentation thoroughly, the number of Districts in a new project may be fewer, possibly in the range eight to twelve. In turn, this would mean that Sida support may have to be withdrawn from some of the Districts in which LMCF is currently active. Thus, one criterion in the selection of target Districts for a new project would be whether other GRZ-sponsored or donor-sponsored projects are active which could continue the work of LMCF (e.g. ASSP/GTZ in Southern Province).
- Current support for LMCF and CFU, while separately programmed, has been integrated effectively in their present projects. We suggest a new project should include integrated input from CFU, meaning that support for CFU would cease to be a separate project.

6.5.3 A Project to Improve Further the Multiplication and Distribution of Seed and Planting Materials

We consider the achievements of MDSP (Annex 3) should be built upon further. The question of how this can best be done is not wholly clear at present, and requires careful examination in a planning stage. Issues which, in our view, need to be addressed in that planning include:

- (a) At its outset, MDSP took a somewhat top-down approach in deciding which crops it would promote. This led to surpluses in some places and deficits in others. There may be a case for a systematic needs assessment before a future project proceeds.
- (b) To date, MDSP has operated on the premise that a backlog of improved seed and planting material is available for multiplication and distribution, and that the seed and planting material are supplied free of charge. Neither of these premises should be assumed to apply in the future. They should be revisited during the planning, and any necessary adjustments should be incorporated into the design of a new project.
- (c) MDSP's main concern is the multiplication and distribution of seed and planting material for food crops other than maize. SHAPES is concerned with the same subject, but is also active in promoting crop diversification and crop processing. Initially, MDSP and SHAPES followed different agenda in selecting target Districts. MDSP are currently operating in 14 Districts, SHAPES in 12, both sets of Districts being scattered fairly widely through Zambia. Two Districts are currently served by both MDSP and SHAPES (Table 6.1). Other support agencies (e.g. FAO) are also active in multiplication and distribution of seed and planting material.

As described above, the situation appears somewhat haphazard. By accounts, geographical duplication is being avoided. Less clear is the matter of whether the best range of services is being provided in these various target areas according to local differences in demand. Equally, it is not clear to what extent the lessons of experience are being shared between the two projects. In this situation, we consider it would be worthwhile for a planning team to take a careful look at (a) the potential for dovetailing the geographical scope and range of services provided by

MDSP and SHAPES, and (b) the possible emergence of gaps in service provision, and the filling of those gaps.

- (d) Linked to (c), we consider a future planning should undertake a careful review in MDSP and SHAPES of multiplier effects, both measured and assumed. In some Districts, project effort has been directed to a limited number of camps per District, and it is proposed to extend the project to other camps within the same Districts in the next phase. Given the expectation of multiplier effects, the question arises as to whether replication of future support in new camps is needed, and if so, in what measure.
- (e) Our impression is that Seed Growers' Associations are still weak in some MDSP target areas. Any future project should include measures to enable SGAs to become independent.

Table 6.1 Geographical Coverage of Target Areas, by District

Province	District	EEOA	MDSP	LMCF	SHAPES
Northern	Chinsali				
Northern	Isoka		**		
Northern	Luwingu				
Northern	Mpika				
Eastern	Chadiza				
Eastern	Chama				
Eastern	Chipata N				
Eastern	Chipata S				
Eastern	Katete				
Eastern	Lundazi				
Eastern	Mambwe				
Eastern	Nyimba				
Eastern	Petauke				
Lusaka	Chongwe				
Central	Chibombo				
Central	Kabwe				
Central	Kapiri Mposhi				
Central	Mumbwa				
Southern	Choma				
Southern	Gwembe				
Southern	Kalomo				
Southern	Livingstone				
Southern	Mazabuka				
Southern	Monze				
Southern	Namwala				
Southern	Siavonga				
Southern	Sinazongwe				
Western	Kaoma				
Western	Mongu				
Western	Senanga				
Western	Shangombo				
North Western	Kabompo				
North Western	Mwinilunga				
North Western	Solwezi				
North Western	Zambezi				
	TOTAL	6	14	20	12

** Isoka District has been selected by MDSP for possible targetting from 2002; in practice some MDSP work has already started in Isoka.

6.5.4 A Project to Further Assist in the Strengthening of Planning, Monitoring, Evaluation and Management Capacities of MAFF

We consider that continuance of Sida support to MAFF HQ in the above fields is important for reasons given in Section 5.2. At the same time, we can see there are some risks involved. Restructuring and better salaries/conditions are clearly crucial. Experience has already shown that present salaries and conditions are insufficient to keep staff in PPB, and investment in staff training without salary increases stands to make this situation worse, not better. Further, there are concerns about the extent to which any improvement in capacity in PPB would actually be brought to bear in respect of the key discussions and decisions for policy and planning in MAFF. We suggest that a future planning team facilitate careful discussions with all stakeholders with a view to minimising these risks.

A possible alternative approach in provision of assistance for planning, monitoring, evaluation and management to MAFF could be to focus part of that assistance at District level rather than national level. If the basic approaches suggested in Sections 6.5.2 and 6.5.3 are found to be appropriate in a future planning stage, applied experimentation will become a principal theme for a large part of Sida-sponsored project assistance. In this matter, the coordinating and monitoring roles of the DACO and his/her Subject Matter Specialists are of key importance. If this option were to be chosen, the comments in Section 3.6 may be relevant.

6.6 Suggestions Concerning other Aspects of Future Project Planning, Design and Implementation

6.6.1 Participatory Planning for a Future Sida-sponsored Programme and Projects

The new programme and all new projects should be the subject of participatory planning in Zambia which fully involves the beneficiaries and all other stakeholders. This process is considered in creating ownership of a project by beneficiaries right from the start. If Sida so wishes, a specialist facilitating team may be appointed to assist in the planning. Such a team should have a strictly facilitating role, and not an executive one. It is clear from the discussion in Sections 6.5.1 to 6.5.4 that preparation of a new programme and projects (even though they build on current Sida project activities) is going to require considerable time and resources.

We therefore consider it wise to extend all the current projects under their existing terms for a one year period. This would also allow all Sida-supported projects (including SHAPES and its Norwegian contribution) to be brought into a common Sida-supported four year cycle

6.6.2 Project Cycle Management and Logical Framework

In general, the current Sida-sponsored projects have not been using the logical framework approach in appropriate ways, and this has led to an incomplete view of the projects' overall and immediate objectives among staff as the projects have proceeded. For the future, we consider appropriate standard project cycle management references and logical framework procedures should be used throughout. Project cycles should include a mid-term reviews in all cases.

In this regard, we consider that Sida's reference for logical framework to be somewhat less than clear on the frameworks which are required, and how they are to be used effectively in project planning, management and monitoring (Reference 115).

6.6.3 Programme and Project Offices

We suggest Sida would operate a programme coordination office in Lusaka. The services of one Sida officer will continue to be required on a full time basis. We consider offices for future projects should be in the target areas unless there are clear and justifiable reasons for them to be elsewhere.

6.6.4 Supervision and Steering

We consider, for all projects, standard Supervisory Board and Steering Committee procedures should be followed in Zambia. This keeps the key controls of the project in Zambia, and ensures that key people are aware of the projects' progress/achievements and their value as examples of how projects can be implemented in the context of an agriculture sector programme.

In light of the suggestions above, we further suggest that the present Follow-up Mission system may be suspended. However, the Evaluation Team has noted the positive contributions made by the Follow-up Missions, and would see a place for further additional advisory missions from Sida, over and above the Mid-term reviews.

6.6.5 Financial Matters

We suggest financing arrangements for Projects should be defined in the preparation stages. Funding through MAFF (FMU) may be appropriate for some projects. Contracts with MAFF may be appropriate for others. A further possibility would be direct funding to an implementing institution under a Memorandum of Agreement between that institution, GRZ and the Government of Sweden. Such an arrangement may be appropriate for private-sector project activities.

We further suggest the involvement of all private sector bodies (including NGOs) in projects should be the subject of competitive tender.

6.6.6 Mainstreaming of HIV/AIDS

In any future programme and projects, Sida should act to ensure that HIV/AIDS is mainstreamed.

Annex 1

Terms of reference for evaluation of the Swedish support to the agricultural sector in Zambia

Background

Sweden has supported the Agricultural Sector in Zambia since Independence. The present Agreement period covers the years 1998–2000 with one year extension to 2001. The total budget for 1999–2001 is 135 MSEK. The support included initially six different components/activities, but has during the period been reduced to five:

- Land Management and Conservation Farming (SCAFE)
- Support to Zambia National Farmers Union/Conservation Farming Unit (CFU)
- Economic Expansion in Outlying Areas (EEOA)
- Multiplication and Distribution of Improved Seed and Planting Material (MDSP)
- Policy, Planning, Monitoring and Evaluation of ASIP Activities – support to the Policy and Planning Branch (PPB) at the Ministry of Agriculture, Food and Fisheries

The sixth component which was initially intended to be included in the support, Food Crop and Seed Research, has been cancelled due to the fact that no agreement could be reached on the project design.

This Evaluation shall cover three of the above components: Land Management and Conservation Farming, Economic Expansion in Outlying Areas, and Multiplication and Distribution of Improved Seed and Planting Material. The CFU was evaluated in 1999 and the support to PPB was not approved until mid 2000.

This Evaluation shall also cover the Zambian Agricultural Sector and the national sector policies including the Agricultural Sector Investment Programme, ASIP, and look into the prospects for the sector as well as the possibilities for a future Swedish support.

Objective of the Evaluation

The objective is to evaluate the ongoing Swedish support to the Agricultural Sector in Zambia and to appraise the Zambian Agricultural Sector in order to give Sida a basis for further discussions on the support to the sector, if any.

The Evaluation shall particularly consider the long-term sustainability of the ongoing support, but also look into the possibilities for a future support given the policies of the sector and the political and economical conditions in the country. Furthermore, the possibilities for the support to the agricultural sector to take on a sector support approach shall be looked into.

Scope of Work

The Consultant shall concentrate on, but not necessarily be limited to, the following issues;

- The Zambian Agricultural Sector
- Skrivs av Torsten
- Multiplication and Distribution of Improved Seed and Planting Materials Project (MDSP)

The Multiplication and Distribution of Improved Seed and Planting Materials Project (MDSP) was formulated as a result of the need to improve production systems of small scale farmers by promoting improved seeds and planting materials of traditional crops.

Significant work has been done in selecting and breeding resulting in the release of improved cultivars for sorghum, pearl millet, finger millet, cassava and sweet potatoes. However, there was limited impact on the production systems of the small scale farmers, due to non availability of improved seeds resulting from the poor distribution system in place.

MDSP began its operations in March, 1997. The major goal of the project is to contribute to household and national food security through the promotion of improved seeds and planting materials among small scale farmers.

The strategy is to facilitate accelerated planting of improved varieties of small grains (sorghum, pearl millet and finger millet); food legumes (groundnuts and cow peas) and multiplication and distribution network for the informal system.

Specific Objectives of the project:

- to increase the area of improved sorghum varieties from 27% of the total area to 50% of the current area,
- to increase the area improved finger millet varieties 9% of the total area to 30% of the current area,
- to increase the area of improved finger millet varieties from 9% of the 24% of the current area,
- to increase the area of improved cassava varieties from 3% of the total area to 20% of the current area,
- to increase the area of improved sweet potatoes varieties from 3% of the total area to 20% of the current area,
- to increase the area planted of improved varieties of groundnuts and cowpeas.

The MDSP is co-financed by the government of the Republic of Zambia (GRZ) and the Swedish International Development Cooperation Agency (Sida) through the Ministry of Agriculture, Food and Fisheries (MAFF). The project is managed by the Zambia Seed Company (ZAMSEED).

The MDSP is at field level implemented by the Seed Control and Certification Institute (SCCI) and the Programme Against Malnutrition (PAM) and through the Department of Field Services of MAFF. In addition the Policy and Planning Branch of MAFF is charged with the responsibility of monitoring and evaluating the project.

Project Areas

The MDSP is currently operating in Northern, Southern, Western, and North-Western Provinces in the following selected districts:

Northern	Mpika, Chinsali & Luwingu
Southern	Choma, Namwala & Gwembe
Western	Senanga, Mongu & Kaoma
North-Western	Solwezi, Zambezi, Kabompo & Mwinilunga

Purpose and Scope of the Study

To assess the overall performance of the MDSP project in relation to the stated objectives for the project and in relation to the objectives for Sida's support to the agriculture development in Zambia.

On the basis of the conclusions for the Evaluation, the Consultant shall recommend whether Sweden should continue the support to multiplication and distribution of improved seed and planting materials in Zambia, and if so, recommend a way forward for such a support.

Specific Objectives

- to assess national policies within MDSP's scope of responsibility, and the project's relevance in relation to the policies, and in the Zambian context,
- to assess the achievements of MDSP, both in relation to the stated objectives for the project and in relation to the objectives for Sida's support to agricultural development in Zambia,
- to assess the performance in the establishment of primary and secondary multiplication sites,
- to analyse the progress made in the seed quality control activities undertaken by SCCI,
- to assess the development of seed entrepreneurship among the small scale farmers in Zambia,
- to evaluate the effectiveness of utilising the extension framework of MAFF while providing the logistical support,
- to highlight any multiplier effects of the project, i.e. adoption of improved seeds varieties and the establishment of an effective seed multiplication and distribution network in the informal sector,
- to assess the contribution made by the project to household and national food security through the promotion of improved seeds and planting materials among small scale farmers,
- to evaluate the management and implementation of the project, the institutional and project sustainability,
- to assess the overall project management in terms of the narrative and financial reporting, project implementation and monitoring of activities,
- to assess the levels of co-operation among the implementing organisations, these being SCCI, PAM and Department of Field Services of MAFF,
- to assess the cost benefit of the project,

based on the above, give recommendations whether Sweden should continue supporting the MDSP, and if so recommend a way forward.

Land Management and Conservation Farming (SCAFE)

SCAFE, originally named Soil Conservation and Agroforestry Extension Project, commenced operations in 1985, with financial support from Sida and technical backstopping by the Regional Soil Conservation Unit (RSCU) in Nairobi, to provide extension advice to subsistence and commercial farmers in Eastern Province. Early messages emphasised arrest of soil erosion through building of physical, labour demanding structures like terraces and drains. The approach has gradually been modified to promote "biological" interventions such as planting of grass barriers and tree rows to facilitate improved soil moisture retention as a reflection of farmers' demands for technologies that prove cost-effective already in the short term; the same requirements have also been guiding the work of the Conservation Farming Unit (CFU), in cooperation with the Zambia National Farmers Union, in the non-governmental sector.

SCAFE, together with CFU forms two of the core elements of the Agricultural Sector Investment Programme, ASIP, support to the land husbandry sector. SCAFE is currently operating in Eastern, Southern, Central and Lusaka Provinces, in total 22 districts. Prior to the present support period (1998/99-2001), the project operations were critically reviewed in conjunction with RSCU, and a number of measures were introduced to improve the equality of work in farmers' fields, from reformulated recommendations to intensified technical backstopping of extension staff.

The main purpose of the project 1998/99–2001 is to develop and integrate soil conservation, agroforestry and pasture technology packages into the various farming systems in Zambia with emphasis on smallholders. The major expected outputs are improved practices adopted by farmers; train extension staff; and increased awareness and interest in productive and sustainable husbandry practices among the farming community.

The project activities are organised within four components:

- Farm Support: promotion of physical and biological structures, soil fertility improvement, farm forestry, pasture and range management, and water management;
- Staff Training: assessment of training needs, and training programme;
- Education and Public Awareness; and
- Management and Co-ordination.

After the reorganisation of the Ministry of Agriculture, Food and Fisheries, MAFF, the Land Husbandry Sub-Programme forms part of the Field Services Department which also includes the Extension Branch. The main contact point with the client farmers are the extension field officers who are backstopped and supplemented by a specialist land husbandry team.

At Provincial level, the operations are directed by the provincial Agricultural Co-ordinator, assisted by staff with special training in land husbandry matters, including an externally recruited adviser. At headquarters level, the project activities are directed by the Head of Soil Conservation Unit, assisted by a Project Support Office (PSO) established by the implementing consultant, ORGUT/ Agrisystems. It is expected that advice on land husbandry practices will gradually become an integral part of the responsibilities of the general agricultural extension service with corresponding diminished need for specialist support.

Purpose and Scope of the Study

To assess the overall performance of the SCAFE project in relation to the stated objectives and in relation to the objectives for Sida's support to the agriculture development in Zambia.

On the basis of the conclusions for the Evaluation, the Consultant shall recommend whether Sweden should continue the support to land management and conservation farming in Zambia, and if so, recommend a way forward, including the institutional set up for the project.

Specific Objectives

- to assess national policies within SCAFE's scope of responsibilities and the project's relevance in relation to the policies, and the in Zambian context,
- to assess the achievements of SCAFE, both in relation to the stated objectives for the project and in relation to the objectives for Sida's support to agricultural development in Zambia,
- to assess the adoption rates of the techniques propagated by SCAFE by farmers and extension staff,
- to assess multiplier effects of the project, i.e. adoption of SCAFE techniques by farmers and organisations which are not participating in the project,
- to assess the technical approach adopted by the project for increased land productivity in relation to other techniques and methodologies, particularly in a Zambian context,

- to assess the intervention methodology in terms of institutional sustainability including extension, financing and marketing,
- to assess the geographical coverage, is the size of the intervention within the possibility of the project,
- to assess the organisational set up, should SCAFE be integrated within MAFF or are there any other possibilities,
- to assess the project administration and cost-effectiveness, including channelling of funds from Sida/MAFF to the districts,
- to assess the relevance of the Project Support Office and the Management Support Group,
- to assess the project accountability,
- to assess the reporting and monitoring sustainability in the present set up within MAFF,
- to assess the cooperation with other organisations/projects, e.g. Conservation Farming Unit, Zambia National Farmers' Union, Economic Expansion in Outlying Areas Programme, Clusa, SCC, RELMA, FARMESA, etc,

Economic Expansion in Outlying Areas Programme

The Economic Expansion in Outlying Areas (EEOA) Programme is funded by Sida and implemented by a consortium led by RWA International on the basis of a contract with the Ministry of Agriculture, Food and Fisheries (MAFF), within the framework of the Agricultural Sector Investment Programme (ASIP). The main linkage between the EEOA programme and MAFF is provided by the National Project Committee, which decides on major policy issues related to planning and implementation of the programme.

The EEOA programme was initiated in July 1995 in response to the economic and political changes which swept the country in 1991; liberalisation of the economy in general, and the agricultural sector in particular, provided line-of-rail provinces with distinct advantages over outlying areas in capacity to exploit economic opportunities; resources committed by the government to cushion the negative effects of the Structural Adjustment Programme fell short of requirements; private smallholder development was seen by the government as the centrepiece of Zambia's agricultural policy. These factors provided the necessary climate to launch the EEOA programme whose objective is to enable smallholders and local business enterprises to take advantage of the new economic policies, thereby improving their standard of living.

The first phase of the EEOA programme lasted from 1995 up to the end of 1997. This period focused largely on participatory planning, facilitation and initial implementation within the first four selected target districts in Northern and Eastern provinces, designing and implementing procedures to address economic opportunities identified by district stakeholders. The second programme period (1998–2001) is a period of intensive implementation of work plans which are compiled locally by representatives of each target district.

The development strategy of the EEOA programme centres on participatory approaches aiming at involving beneficiaries and development partners in planning, decisions and follow-up of economic activities. This process generates ownership and personal commitment among stakeholders. Sustainability is achieved through increased income and profit for individuals and companies. Sustainability is further strengthened by beneficiaries' contributions to the cost of programme activities. Gender mainstreaming has a key role in all EEOA assisted activities.

The EEOA programme approach is realised through four closely linked components:

- Facilitation Process
- Business and Management Training
- Rural Economic Expansion Facility (REEF) for improved rural infrastructure
- Financial Services for Economic Expansion

Purpose and Scope of the Study

To assess the overall performance of the EEOA programme in relation to the stated objectives of the programme and in relation to the objectives for Sida's support to the agriculture development in Zambia, as well as the prevailing agricultural policies in Zambia.

On the basis of the conclusions for the Evaluation, the Consultant shall recommend whether Sweden should continue the support to the Economic Expansion in Outlying Areas Programme, and if so, recommend a way forward.

Specific Objectives

to assess national policies within EEOA's scope of responsibilities and the project's relevance in relation to the policies, and in the Zambian context,

- to assess the achievements of EEOA, both in relation to the stated objectives for the project and in relation to the objectives for Sida's support to agricultural development in Zambia,
- to assess the multiplier effects of the project, i.e. what impact does EEOA have on non-intervention areas,
- to assess the technical approach adopted by the project within the different components,
- to assess the intervention methodology in terms of institutional sustainability including extension, financing and marketing,
- to assess the sustainability aspects in relation to farmers/households, both financial and technical,
- to assess the geographical coverage, including phasing-out/phasing-in aspects,
- to assess the organisational structure of EEOA, relation to the Ministry of Agriculture, Food and Fisheries, district authorities and other organisations, if any,
- to assess the project administration and cost-effectiveness,
- to assess the project accountability,
- to assess the reporting, monitoring and evaluation efficiency and the relevance/function in the organisational set up,
- to assess the co-operation with other organisations/projects.

Methodology

The Evaluation shall be made through analysis of available programme/project documents and other documents deemed necessary by the team. Interviews shall be carried out with, but not necessarily limited to, representatives of the target groups in the field, officials from the projects, the Ministry of Agriculture, Food and Fisheries, the Embassy, and other relevant actors in the small scale agriculture sector.

The Evaluation shall be carried out based on a gender perspective; i.e. analysis made and findings presented shall consider both potential for involvement of women as well as men and the impact and consequences for men and women and their respective roles and responsibilities.

The Evaluation shall include an assessment and analysis of the projects for:

- how environment impact assessments are applied and mainstreamed into the work,
- how poverty reduction is defined and mainstreamed into the work.

The assessment and analysis should be reflected against:

- Sida's Policy on Sustainable Development (including "Guidelines for Environmental Impact Assessments in International Development Cooperation"),
- Sida's Poverty Programme (Action Programme to Promote Sustainable Livelihoods for the Poor and to Combat Poverty).

Consultant

The Evaluation team shall appoint a team leader. The team leader shall be responsible for the planning and co-ordination of the mission, the distribution of work and responsibilities among the team members and the finalisation and presentation of the report to Sida.

The team shall preferably have, but not necessarily be limited to, the following expertise and experience:

- Project and organisation assessment and management including financial aspects,
- Research and development issues, including methodology and methods development, social sciences (people's participation and gender),
- National agricultural extension, development and strategy formulation and implementation in the Southern Africa/Sub-Saharan context.

None of the team members should have been involved in the implementation of the programmes/projects.

Reporting

A draft final report in 5 copies each and on diskette shall be submitted to Sida/Department for Natural Resources and the Environment in Stockholm and to the Embassy of Sweden in Lusaka at the end of the field work period.

A final report in 10 copies each and on diskette shall be made available to Sida/DNRE and the Embassy of Sweden in Lusaka not later than two weeks after receiving Sida's and the Embassy's common comments on the draft final report.

The report shall be written in English, and shall not exceed 20 pages, excluding annexes.

Time-schedule

The Evaluation study should be carried out within a period of five weeks, including preparatory work and report writing. The study shall be carried out either November/December 2000 or January/February, 2001 and include a minimum of four weeks of field work in Zambia.

Annex 2

Evaluation of the Project: Economic Expansion in Outlying Areas (EEOA)

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1. Executive summary

EEOA is seen as a new concept to develop the entrepreneurial skills of rural people in outlying areas with only minimal support in the form of direct finance. The expected result is the establishment of a sustainable process of economic growth in the target areas with minimal dependence on outside resources. The target group is smallholder farmers and business people in outlying Districts. The main EEOA activities are facilitation, development of businesses (including credit provision) and support for infrastructure development.

Overall, we judge that EEOA has achieved the majority of its aims. Many beneficiaries have increased income and consolidated their economic base in what appears to be a sustainable manner. EEOA has adopted a flexible, process approach involving the full participation of beneficiaries in planning and decision-making. This has contributed in large measure to the success of the project. EEOA is not causing any major negative environmental effects at present.

Specific comments are as follows:

- (a) The facilitation process is an effective method for strengthening the capacity and economic initiatives of small-scale farmers and other rural people engaged in agriculture-related activities
- (b) Full base-line surveys and impact analyses of REEF projects are required
- (c) The savings and credit systems supported have taken a long time to evolve and are still only at a pilot stage.
- (d) Local organisations and institutions for the continuation of activities after EEOA has left appear to be weak, and not yet sustainable.
- (e) Local entrepreneurs do not yet have sufficient links with external markets, input suppliers and other service providers
- (f) The numbers of indirect beneficiaries (the multiplier effect) appear to be over-optimistic.
- (g) EEOA lacks an overall Immediate Objective, leading to doubts about the target group and the intended emphasis of the project (agriculture/non-agriculture, production/processing and trade)
- (h) Economic development at local levels covers production, processing and marketing. It is noted that many of the successful activities to date concern processing and trade. It is not clear whether this strategy will in fact lead to the desired investments in production.
- (i) Links with MAFF and District Councils appear to have been pursued more successfully and relevantly in some Districts (e.g. Petauke) than in others (e.g. Katete)

2. The subject of the evaluation

Economic Expansion in Outlying Areas (EEOA) has covered six Districts, three Districts in each of Northern and Eastern Provinces. The present phase of the project is the second one, which commenced on 1 January 1999 and is planned to end on 31 December 2001.

A conceptual difference between the first and second phase is that agriculture related activities are emphasised further in the second phase (Reference 323, page23). The first phase did not specify whether the entrepreneurs should come from agriculture, trade, commerce, service or other economic activities.

The framework of EEOA, and the base for the evaluation, is given by the following four standards:

- (i) The Goal (or Overall Objective) of the programme is “to contribute to improved living standards in the target group through increased income”.
- (ii) The target group is defined as: “institutions or individuals engaged in (or having the potential for) activities related to agricultural production, marketing and processing.
- (iii) Outlying areas are defined as “those which are disadvantaged due to a variety of factors: poor quality soils, low or very high rainfall situations, long distances from major markets, inadequacy of infrastructure, particularly transport and communications, little or non-existing processing technology”.
- (iv) A further dimension of the framework has become more explicit in the second phase. This is evident in Reference 323, page 23 which states “The objectives of the Programme are those of the EEOA project for the period 1995 to 1997. They remain relevant for the Programme with one modification, namely the inclusion of “agriculture” in objective (i) regarding the facilitation component, so as to emphasise the Programme’s focus in the agriculture sector”. The emphasis on agriculture is in fact just a reiteration of an implicit understanding during the first phase.

EEOA introduces a vehicle, through a facilitation process, for developing the entrepreneurial skills of people in outlying areas with only limited financial support. The intended end-result is the establishment of an institutionally viable and economically sustainable process of economic growth in the target areas.

A key assumption of the programme is that change in rural community will take place if a “critical mass” of entrepreneurs is supported with agriculture-related activities leading to the intended process of economic growth. It is then assumed (a) that the economic growth for the critical mass will trickle down to benefit subsistence farmers and other marginal groups in terms of increased production and employment opportunities, and (b) that the improved economic performance and business-minded activity of the ‘critical mass’ will serve as inspiration for others in the same community to copy. This will ultimately lead to a general development process to benefit the entire population and geographical area.

The facilitation process targets a “critical mass” of existing or potential entrepreneurs (potentially business minded people), for whom training in business-related functions is being provided. The participating potential entrepreneurs are identified during a series of consultations between the selected rural communities and the EEOA Facilitators and District Co-ordinators, who also arrange training and other follow-up measures. Training activities are adapted from ILO’s business manuals developed for small-scale entrepreneurs in developing countries. The facilitation process is supported by infrastructure development (REEF projects) and savings- and credit schemes.

EEOA is implemented under an agreement between the Government of Zambia and the Government of Sweden. MAFF is responsible for supervising the project, and heads the National Programme Committee established to oversee and guide it. A consortium of consultants is responsible for implementation of the project, and all EEOA staff at District and HQ levels are employed by these consultants. Monitoring is coordinated from the HQ through District and field staff.

3. Purpose, methodology and limitations

The evaluation is the final evaluation of the second phase. It should be noted that no mid-term review has been carried out during the first two phases. However, since the beginning of the project in 1995, a Follow-up Team (previously called the Supervisory Mission) has undertaken semi-annual

reviews of progress and has prepared recommendations. The present final evaluation is meant to provide suggestions to the implementing and funding agencies regarding lessons learned and future courses of action.

The Evaluation Team has applied comparative methodologies during the evaluation. Assessments have been done of the conditions before project inception and as of present. Secondary data has been reviewed. Primary data has been gathered through discussions and interviews with direct and indirect beneficiaries. Observations and comparative reviews have been carried out of targeted beneficiaries and institutions, as well as of individuals and institutions not covered by EEOA. A number of Rapid Rural Appraisal and Participatory Rural Appraisal techniques have been applied during the evaluation task; key informant interviews, structured and semi-structured interviews, dialoguing, focus-group discussion, and direct/indirect observations.

The Evaluation Team held detailed discussions with management and staff of EEOA in Lusaka, with MAFF, the Swedish Embassy and several other individuals and institutions who directly or indirectly are involved in EEOA. Field trips were undertaken to Northern and Eastern Provinces, where discussions were held with EEOA staff, targeted beneficiaries, neighbouring communities, the public, local authorities and many other individuals and institutions (Annex 6).

The preliminary findings and recommendations were presented to project staff and management prior to a De-briefing Meeting on 23 February 2001.

It should be noted that absence of detailed benchmark or baseline data has restricted the scope of the evaluation. It is difficult to quantify to what extent EEOA has been able to achieve its set objectives. Discussions of the actual and expected impacts are based on data deriving from a number of impact assessments carried out on request of EEOA, correlated with field observations made by the Evaluation Team.

The value of, and need for benchmark and baseline data is emphasised. At the same time it is recognised that the key activity of the project is the development and implementation of a *facilitation process* leading to improved socio-economic conditions. Therefore, the main field of attention for this evaluation is the content, focus and viability of the facilitation process. This is just as important as the tangible results, i.e. the anticipated socio-economic growth.

4. Evaluation issues

4.1 Relevance

The Evaluation Team has examined relevance on two levels, (a) the relevance of the design and (b) the relevance of the present implementation thrust.

4.1.1 Design

We conclude that the EEOA design is highly relevant in a Zambian context, where future micro- and macro-economic growth depends on increased production and productivity within the agricultural sector. The design requires few resources, it is relatively easy to replicate, and therefore provides a qualified method of bringing about rural change to the benefit of subsistence farmers and other marginalised groups in Zambia. It is well-suited to meet the returning urban population with meaningful opportunities in their home villages. Many returnees possess certain skills and investment capital which are not commonly available in rural Zambia. These returnees could continue to be targeted by EEOA as prime movers in rural change. Furthermore, the EEOA design seems to provide a useful model for GRZ and SIDA in their efforts to alleviate poverty, increase crop diversification and assure food security.

Given the direct relevance of the EEOA approach in Zambia, the Evaluation Team suggests that the challenging task of reaching the truly outlying areas, and a focus on agriculture-based socio-economic development should be kept in the fore in any future phases of the project. It is likewise strongly suggested that Sida ensures that subsistence farmers are the ultimate beneficiaries of EEOA, and that the process of adding value to their produce is aimed at, directly and indirectly. It is further suggested that the implementing and funding agencies participate actively in interpretation and adjustment of the design to be even better adapted to reaching the remotely located outlying areas.

4.1.2 Implementation

The EEOA design has proved its high value during implementation and has demonstrated its flexibility. A process is continuously going on to tailor the design to different target groups; traders, service enterprises, large and small farmers.

The present design is geared towards starting up economic processes through facilitation processes supported by infrastructure works and credit lines. The target group addressed by EEOA can be separated in three different categories: farming households, where in principle the whole family is approached, emerging entrepreneurs in the rural communities, who receive intensive facilitation to establish their business, and other entrepreneurs in the District with relevant activities. These different categories are all important partners in a process of economic expansion in outlying areas. Each group requires a different type of facilitation, even though the general facilitation cycle provides a useful framework for addressing all three groups. Even though EEOA in the facilitation differentiate and adapt types of support to these different groups, this fact is not well described in EEOA documentation, and not all consequences of the differences between groups are taken into account.

Rural finance and marketing are major obstacles faced by the Interest Groups working with EEOA. Many farming households are at the moment forced to sell their products at very low prices due to lack of storage, transport and other marketing structures. In some cases, this has given opportunity for middlemen (emerging or district entrepreneurs, using the above distinction) to start taking advantage of the situation through provision of expensive credit, collection of products at very low prices at the farm gate, and insisting on low prices owing to their monopoly situation. Unless specific effort is made by farmers to obtain profitable marketing arrangements, there is a risk that this these events may become even more common as the project progresses. Organisation of farmers and other producers to this effect is still a relatively weak part of the EEOA concept. As things stand, it is questionable whether the intended target group and beneficiaries will reap the economic benefits of EEOA. Through interviews with traders, farmers and local government officials, the Evaluation Team had indications that certain middlemen have benefited significantly from EEOA facilitated activities, sometimes to the expense of other EEOA target groups.

The Evaluation Team therefore recommends that more detailed market analyses, including supply and demand analyses, are undertaken by EEOA before starting up activities, as well as during the facilitation process. It is also recommended that EEOA include all facets of marketing and rural finance in its future activities to ensure that its objectives are kept in focus.

In conclusion, the Evaluation Team finds the design highly valuable, but recommends some modifications to match the present changes in the implementation environment. Chapter 6 of this Annex contains further details.

4.2 Impact

4.2.1 Multiplier Effects

TOR item: to assess multiplier effects of the Project, i.e. what impact does EEOA have on non-intervention areas, if any?

A strong indicator of EEOA impact will be that members of the targeted communities (facilitation areas and other areas in the target Districts), who are NOT direct beneficiaries, have increased their income after having taken up new economic activities.

There is evidence both from our field visits and from a number of tracer and impact studies (References 306, 307B, 308, 309, 313, 319, 320 and 324) carried out by independent consultants on request by EEOA, that the involvement of direct beneficiaries in increased economic activity serves as an inspiration for neighbouring communities, encouraging them to find markets, increase production and copy activities carried out by the direct beneficiaries. EEOA progress reports state that neighbours, friends and family members ask the direct beneficiaries for information and advice on how to take up economic activities.

Regardless of the many positive reports from the target areas, it has been difficult for EEOA to provide reliable data to quantify the multiplier effect in the targeted Districts. Until such data is available, it will not be possible to validate the assumption that increased economic activity among a critical mass of successful entrepreneurs will trigger a general economic development process in an outlying area.

There are good technical reasons for not yet having solid data on the multiplier effect. Firstly, the baseline data which is needed to assess the impact has not been collected. Baseline studies have been conducted at the outset in each facilitation area, but that data is not sufficiently detailed and focused to serve as a reference point for measuring increases in income at household or community level. Secondly, it is difficult to ascertain such an impact at a time when the project is only partly complete.

In an exercise to calculate the cost-benefit of the project, the multiplier effect has been investigated by EEOA (M&E). The facilitators have been asked to estimate the number of people who are inspired by the direct beneficiaries to copy their activities in some form (dealing with agriculture on business terms, calculating costs and benefits, marketing of products, etc.). By these sources, the multiplier effect of each direct beneficiary constitutes on average 2 to 3 persons within the household, 2 to 3 persons in the facilitation area copy, 2 to 3 persons in adjacent areas, and one person in non-adjacent areas (Reference 327, Appendix 1). According to this estimate, the multiplier effect is high, covering about 24000 indirect beneficiaries (multipliers).

There is no indication in the estimate of the level of adoption of activities by the multipliers. Multipliers cannot be expected to have taken up new activities and approaches as intensively and efficiently as the direct beneficiaries, nor can they be expected to arrive at the same level of increased income. Both the impact studies and the Evaluation Team field visits indicate that the increase in income is significantly lower among the multipliers.

The tracer and impact studies mentioned above document both successes and failures, and they point to a number of aspects, which are critical for EEOA to achieve its objective. The studies clearly indicate, that the entrepreneurial skills of targeted individuals and organisations are still weak. This gives considerable risk that they can fall to pieces if and when the surrounding conditions are constrained (e.g. collapse of the market for individual crops, increased costs of production and/or marketing, interruption of contacts with local government and market information, etc.).

This vulnerability of the positive achievements among direct beneficiaries suggests that individuals and organisations indirectly benefiting from EEOA will also face difficulty in sustaining the process. In order for EEOA activities to have long-term sustainable impact, it will be important not to withdraw from the facilitation areas too soon, but to allow for gradual withdrawal in accordance with the actual capacity of each area.

EEOA have not yet attempted to assess systematically the impact of the REEF infrastructure works. The impact studies indicate that the works are of positive use to the target communities, and have contributed to improving the possibilities of those communities to carry out economic activities.

4.2.2 Sustainability of Target Group Activities

TOR item: to assess the *sustainability aspects* in relation to farmers/household, both financial and technical

Information from the impact and tracer studies highlights three areas in which direct beneficiaries state they need assistance and support beyond that which is presently provided:

- organisational strength of associations, cooperatives and groups
- capacity of both individuals and organisations to seek solutions to problems through establishment of contacts with appropriate organisations, institutions or individuals
- linkages with the market

These points highlight the vulnerability of the process started. Many beneficiaries state that they cannot yet sustain their activity without support from EEOA, i.e. they do not yet know where to go (who to contact) if their present activity runs into problems. Most of the more complex organisations, like associations, cooperatives, inter-sectoral committees and REEF committees are not sustainable after three years of operation in a facilitation area.

A further point of vulnerability stems from the market orientation. Because of their weak economic situation, subsistence farmers are forced to adopt a strategy of risk avoidance, in which a diverse production of subsistence crops plays an important role. The market orientation promoted by EEOA might render the participants more vulnerable if they downscale on the risk avoidance strategy to take up a more business-oriented strategy. For their market-oriented enterprises to be sustainable, farmers engaged in ‘farming as a business’ will depend on reliable continued market information and outlets, provision of up-to-date technical services (including extension), infrastructure development and social services. This requires a relatively well-developed economic, social and physical infrastructure in the outlying areas, which is exactly what they lack at present. The market-oriented individuals (or individual households) are vulnerable without development of supporting market institutions.

4.2.3 Impact on Environment

We conclude that EEOA activities are not having any substantial negative effect on the environment at present. However, as an example, it was noted that clear-felling of trees and heavy cultivation on sloping lands present a potential threats, and such aspects need to be attended to in any future project of this type (Annex 4, Section 2.2.1).

4.3 Effectiveness

4.3.1 Effectiveness of the Project Concept

EEOA has developed a very strong “engine” for change in rural communities. This “engine” has developed its strength from a responsive process of adaptation of methodologies and activities to the concrete situations encountered in the field. Hard work has been done by the facilitation teams

to get the message across in the facilitation areas, that EEOA provides skills and not hand-outs. Members of target groups have responded very positively by requesting in large numbers the training and facilitation services offered by EEOA. The project is now consolidating this “engine” and its individual components through the elaboration of guidelines and manuals for the different project components (facilitation manual, information packs, REEF infrastructure manual, etc).

4.3.2 Achievements in Relation to the Stated Objectives

TOR item: *to assess the achievements of EEOA in relation to its stated objectives*

The long-term objective of EEOA is to contribute to improved living standards in the target group through increased income. Three immediate objectives are formulated, one for each of the three main components of the project. The objective for the facilitation component is to enable anyone engaged in agriculture production, processing and marketing to exploit economic opportunities under a liberalised market economy. The objective for the infrastructure component is to improve local infrastructure to support economic expansion. And the objective for the credit component is to improve financial management skills and access to lending for entrepreneurs (Reference 323, page 23). While the facilitation process is directly focused on agriculture-related activities, the supporting functions established under the infrastructure and credit components address economic expansion more broadly, without making special reference to agriculture. Achievements must be measured in relation to the effects on target group and target area.

4.3.3 Effect on the Target Group

During its present phase, EEOA has been able to assist about 3000 households in the targeted areas in increasing their income and consolidating their resource and economic bases. Economic activities cover a wide range, from production of field crops and vegetables, bee-keeping, oil processing and poultry rearing to marketing and the running of restaurants. Thus, the EEOA objective of increased income has generally been met for the direct beneficiaries. If the surrounding conditions remain conducive, i.e. good access to markets and good market prices for products, it can be expected that many of them will be able to sustain the positive development. On the other hand, some of the businesses, which beneficiaries engage in are much less profitable and/or are more risky because of difficult technical aspects (in vegetable production, for instance). For such beneficiaries, improvements in income are fluctuating and much less certain.

A recent impact study of the business trainings (Reference 302) reveals that income levels of most trainees (and especially of those occupied within farming and agri-business) is less than 1 million Kwacha per year. Thus, increases in income gained from business activities are still moderate. Sharp increases in income are found chiefly among traders and people in other non-production occupations.

4.3.4 Effect on Target Area

In its first two phases, EEOA has concentrated on the more accessible areas of each selected District, i.e. in the Boma and other easily accessible areas with high growth potential. Focus has been on identifying people in these rural communities, which demonstrate potential for economic improvement and who are ready to develop their entrepreneurial skills. This has led to an emphasis on people in service businesses and farmers with relatively large farms (many of whom have relatively high levels of education), and to a concentration on relatively favoured areas within the outlying Districts selected.

In order to facilitate the copying by less resource-rich rural people of the entrepreneurial activities, EEOA staff has gradually moved attention and focus away from the Boma and more into the

facilitation areas and towards farmers with fewer resources. We consider this change in focus should be strengthened in a next phase in order to reach the main target group and target areas.

EEOA deals with agriculture related activities. In the first six-year period, emphasis has been on the more market-oriented areas in the outlying districts. This has led to a bias towards trade and marketing, not necessarily related to agricultural production. Opportunities for economic expansion in the more outlying areas will be highly concentrated on agricultural production. It seems to the Evaluation Team to be necessary in future to emphasise and strengthen the links between production and value-adding, thus giving equal attention to the production side and to the processing/marketing side.

Since 1996, 29 infrastructure constructions have been completed, among which two are no longer functional. In addition, a further ten constructions were in progress by the end of 2000 (Reference 304, page 33). The number of households participating directly in construction of REEF constructions is currently 7812 (4344 for the period 1999–2000), and about one third of these are women. A total number of 41,605 households within the facilitation areas are estimated to have benefited from the constructions (25,721 during 1999–2000) (Reference 327, paper 4.2). An analysis of the real rate of return on projects implemented in 1996 is planned for 2001.

The possible negative environmental effects of EEOA-facilitated activities are at present not taken sufficiently into account during preparation of new activities (Section 4.2.3).

4.3.5 Effect on Districts

The work of EEOA is very well received by District Administrations in all the Districts visited by the Evaluation Team. The EEOA approach to facilitation and development, avoiding hand-outs and supporting skills development, is generally appreciated by District authorities. In addition, they see REEF infrastructure works as an important contribution to overall development in their Districts. Markets built under the REEF facility provide the District authorities with a direct opportunity for revenue collection at a time when Districts have very few sources of revenue (Main Report, Section 3.6). These revenues could be used on development of the District, but the capacity of the Districts to administer the revenue and to invest it is presently very low, and there is only limited evidence that the collected revenue is invested in development.

EEOA contacts with District Authorities and the creation of the DACSEEs (former DIPWOGs) has increased the awareness of the District Authorities of the importance of creating a conducive environment for economic development, for infrastructure development and for district level planning.

4.4 Efficiency

4.4.1 Efficiency of the Technical Approach

(a) Facilitation

EEOA has adopted a highly dynamic approach which is captured in the facilitation cycle, including participatory opportunity identification, needs assessment, action planning, resource mobilisation and evaluation. An important element in EEOA facilitation is the household approach, which has allowed for participation of both men and women, young and old in the activities, and which has led to significant changes in intra-household relationships. Furthermore, the interest group approach has allowed for people with few resources to benefit from group action to establish viable businesses at a manageable level. Creation and strengthening of local organisations (associations and cooperatives, maintenance committees, etc.) has been supported, as has their capacity to

establish contacts with local government, private operators and market links. But this aspect is among the less-developed in the facilitation process. Further work should be done in facilitating the organisation of producers to support their participation in economic expansion.

The facilitation cycle serves as an effective tool for field facilitators, and this is reflected in a strong professional self-confidence among EEOA field staff. The District Teams are generally highly motivated and a genuine team spirit is felt. Some EEOA Facilitators have had experience in participatory work before joining the project, and all Facilitators go through extensive EEOA training on participatory methods and facilitation. The practical work with the facilitation cycle further increases their skills in adapting advice and support to the needs and interests of the beneficiaries. The Facilitators keep valuable, detailed records from each encounter with the beneficiaries, but at present there seems to be only little use of these records, especially from HQ levels.

(b) Agricultural production and promotion of improved techniques

Advice on agricultural production techniques is not a separate component of the EEOA programme, but it indirectly constitutes an important element in the facilitation process. EEOA's approach to promoting agricultural production and processing is to identify a range of profitable crops (including food crops), and to promote increased production. Crops promoted are *inter alia* vegetables, sunflower, coffee and beans. Provision of agricultural technical advice is in most cases assured through collaboration with MAFF extension (facilitated by LM&CF in some places), but sometimes also other resource persons with special technical expertise are called upon. The involvement of beneficiaries in identifying and selecting advisers is not yet fully developed. This could be stressed further in future phases.

(c) Business and management training

This EEOA component has undergone enormous changes over the six-year project period. Initially, management training was an integrated part of the REEF component. In 1996, a few management courses were conducted for target groups other than contractors, and in 1997 an agreement was reached with ILO to use its Start Your Business (SYB) and Improve Your Business (IYB) Training Modules for training of EEOA target groups. Demand from the Districts for this type of training was high. At the end of 1998, it was decided to include Business and Management training as a full component in the project.

Initially, the Business and Management training component depended heavily on ILO manuals and approaches, with a bias towards general business and service activities, and with little relevance for farming business. Some of the course elements were difficult to follow for people with no or very little basic education.

During the first years, the training was conducted in the District Bomas. A high proportion of the participants were Boma-based, and most of them were engaged in service businesses. Since early 1999, most of SYB trainings have been conducted in facilitation areas, and a higher percentage of the participants now come from those areas. Among other effects, this has facilitated the participation of more female farmers.

The stronger focus on agricultural producers, which has resulted from the move of training to the facilitation areas, has attracted the attention of EEOA to a pressing need to adapt the training materials to farming business, and to people with limited reading and writing skills. Women Entrepreneur Workshops have been introduced to focus the special needs of rural women, and Family Entrepreneur Workshops have been introduced to create support for the women entrepreneurs. Involvement of whole households, and thus of household members who can write, is the way in

which the Trainers try to make it possible for illiterate farmers to participate and benefit from the courses.

For reasons of efficiency IYB training, including short-duration advanced courses on costing, are still being conducted in the Bomas.

The ILO training material is now being adapted to farmers and translated into some of the local languages. A tested course book will soon be ready. Furthermore, a deliberate emphasis is now put on training trainers from within the rural areas (as opposed to the Bomas), in order to facilitate a more frequent follow-up on the training.

A total number of 379 women attended Women Entrepreneur Workshops in 1999 and 2000, and 2377 people were trained in the Business Trainings (SYB and IYB).

The impact of the trainings has recently been the subject of an impact assessment study of SYIB training (Reference 302). This report gives very useful information on trainees' perceptions of the training, of their utilisation of the techniques learned, and of the increases in income obtained. 54 percent of all trainees between 1998 and 2000 are occupied in agriculture-related activities, while 46 percent are occupied in trade and other businesses.

The training is overwhelmingly well-received by the trainees, all of whom state that it has been useful. Most (90 percent) of the trainees claim to maintain records on expenses and sales, and most were able to provide fairly good records. Market surveys and costing of indirect costs are some of the tools which have been highly used. Many farmers have used their new skills to diversify crops and to take up secondary activities such as retailing.

A different picture emerges when it comes to adopting and implementing the techniques learned. Effective utilisation of costs and sales plans, cash flow plans and similar tools to monitor the performance of their enterprise, have been demonstrated by less than 5 percent of the trainees. The large majority of the trainees indicated that they were not able fully to understand the sections of the training courses dealing with these particular issues, and thus their record keeping is not being used effectively. Many trainees only consider using the tools when entering into new businesses, not in monitoring their ongoing business.

There is a strong case for further adaptation of the business and management training to the needs and capacities of farmers in outlying areas in order for EEOA to achieve its objectives.

(d) REEF infrastructure

The REEF component, addressing general community development through improvement of infrastructure, has initiated relevant construction works with thorough, transparent procedures for contracting the works and community maintenance. A comprehensive identification process is established. As part of the facilitation process carried out with a community, infrastructure constraints to business expansion are discussed, infrastructure needs are assessed and a preliminary Community Action Plan is made, based on discussion of community commitment and prioritisation (Reference 310, page 8). Focus for choice of REEF projects is put on alleviating constraints to business expansion. It is not clear from EEOA reports how the project deals with other less business-oriented community priorities such as social infrastructure, but such works are not presently supported by the project.

Once the priorities have been decided by the community, appraisals are made both by technical experts, including Environmental Impact Assessment, and by the community. An Appraisal Report

is prepared. Finally the M&E Coordinator compiles a cost/benefit analysis of the construction. These documents serve as basis for the approval by the EEOA Head Office and the DACSEE (Reference 310, pages 10 and 11). The implementation procedures are thorough and cover the relevant areas and tasks.

There has been a change in focus for the infrastructure projects during the six years of EEOA implementation (Reference 327, paper 4.2). During the Pilot Phase (1996–1998), the majority of projects were implemented by whole communities, sometimes with an unclear economic benefit. Most of the projects assisted during the Consolidation Phase (1999–2001) have been implemented by one or two Interest Groups, and they are now more focussed on directly supporting economic activities of the Interest Groups. Still, 58 percent of the projects approved during the present phase are roads, bridges or markets, which benefit community at large, and 42 percent of projects are irrigation or storage facilities, which benefit a smaller number.

(e) Credit and savings

The credit component has encountered several unforeseeable constraints, which have delayed the implementation. As a result, no credit mechanism is yet effective, even though a new agreement with Micro Bankers Trust has resulted in granting of a small number of credits in 2000. Lack of access to credit is a real constraining factor for many of the rural entrepreneurs. Efforts should be continued to support the creation of locally based, viable credit facilities.

Emphasis on savings has proved that there is ample capacity to save among business people and larger farmers, whereas savings groups have been more difficult to establish among small-scale farmers in outlying areas. Savings groups, mainly based in and around the Bomas, have been very successful in some districts, and the groups will soon be able to establish proper credit lines. But the savings groups established in facilitation areas of the same Districts are nowhere near as viable as the Boma based groups. There is a need to take the special conditions prevailing for small-scale farmers, as their general lack of regular income surpluses available for saving, into consideration in future adaptation of support to savings- and credit-systems.

4.4.2 Cooperation with Other Organisations/Projects

TOR item: *to assess the **cooperation** with other organisations/projects*

(a) District authorities

Concerning cooperation at District level, in all Districts, the steering committee for EEOA, DAC-SEE, operates as a subcommittee to the District Agricultural Committee. This gives an automatic link to the District Administration and District Council. Furthermore, EEOA District Coordinators in many cases sit on the District Development Coordinating Committee, which is the overall technical advisory committee to the District Administrator and the District Council, and which is closely involved in general planning and coordination of District activities. EEOA is thus well placed to link and coordinate with other District activities, and in most of the Districts of operation there is a well-established collaboration between EEOA and the local government structures.

In some cases, though, it was observed by the Evaluation Team that EEOA was not well informed about concrete efforts to develop planning capacity at District Authority level. This is considered a very important aspect for sustaining the momentum for economic expansion in a District, especially after EEOA withdrawal, and it should receive more attention in the future.

(b) MAFF and other stakeholders at district and national levels

EEOA is well aware of the importance of collaborating with MAFF extension staff at District level. The MAFF camp officers are in close contact with the rural communities, often the ones with the closest contact. Unfortunately, the lack of resources in MAFF has led to a serious deterioration in services and resources at camp level. Many camps are not staffed, and staff is in general poorly supported in terms of training and up-dating of technical information.

EEOA has contributed to an upgrading of MAFF extension staff through training in the Participatory Extension Approach (PEA). This effort has been well received by the agricultural extension staff, and many officers have started implementing some of the approaches. It has been noted in the field by the Evaluation Team that the amount of training in PEA, and especially the level of support after training received by the extension staff, is not high enough for them to be able to carry out PEA in full. EEOA is aware of this fact, and is now training Core PEA Teams in each District. This move has started to increase the support capacity within MAFF.

4.4.3 Geographical Coverage and Scope of the Project

TOR item: to assess the **geographical coverage**, including **phasing-out/phasing in** aspects

EEOA has been able to cover an important number of areas and people, and has given high value for money, in that it has created a lot of immediate results from the activities which it has carried out. As mentioned above, the more outlying areas in each District have rarely been covered by EEOA activities during the first two phases of project.

Phase-in strategies appear very efficient, and phase-out from individual areas has been implemented in several places. Contact with the phased-out areas is maintained at some level, and many beneficiaries from these areas regard this contact as an important element for the continuation of their business activities. EEOA staff still assist people and groups from the phased-out areas with establishment of contacts to markets, public authorities, etc. This is a clear indication of the continued need for support and advice after phasing out.

4.4.4 Organisational Structure of EEOA

TOR item: to assess the **organisational structure** of EEOA

EEOA has about 50 staff, and is headed by an expatriate National Coordinator.

EEOA appears solidly established with suitable and functioning administrative and accounting structures. The HQ is located in Lusaka with five technical full-time staff below the National Coordinator. A small unit is located in each of the six District Headquarters, each with 4 to 5 technical and a few administrative staff. Two Field Facilitation Advisers are based in the two target Provinces to support the District Teams in the facilitation.

The National Programme Committee includes representatives from UNZA, ZNFU and major marketing companies, along with representatives from the DACSEEs, and MAFF (Chair of the Committee). The Committee is to be consulted for any major changes in project approach and activities. This was the case, for instance, with the elaboration of the Information Packs, with establishment of the new SSDP, and the Research and Development Fund. The Committee also has a role in policy and formulation of project approaches. This role has not been predominant in Committee work so far, but has been pursued in 2001 in a two-day workshop, initiated by Project Management, on the future of the Project. Issues discussed on this occasion were the number of

Districts to be included, the types of activities to continue, the role of the project as an independent organisation or in backstopping role for other projects.

4.4.5 Efficiency of Project Management, Administration and Accounting

TOR item: *to assess the Project administration and cost-effectiveness (cost-efficiency)*

(a) Project management and planning

The planning process leading to the annual workplan and budget starts in October and is meant to be concluded by the end of December with approval by the National Project Committee. The planning process starts at District level with the DACSEE, assisted by HQ staff, taking a leading and facilitating role. The first steps in the planning process are a SWOT analysis at District level and a 2-day workshop at Central level for HQ staff, Provincial and District Coordinators (at times including the Head Facilitators). The approved annual workplan is broken down in quarterly plans and budgets prepared at quarterly meetings for HQ, Provincial and District Coordinators. The venue has so far been the HQ in Lusaka. Six-weekly operational plans are further developed by each District, and communicated to HQ level. In addition, the management undertakes periodic supervisory trips to project sites.

Necessary adjustments and modifications are prepared by the National Coordinator for approval by MAFF and the Swedish Embassy. According to Programme Management this system has so far had sufficient flexibility for making the necessary adjustments. The observations of the Evaluation Team have confirmed this.

Calculations of project cost effectiveness are not considered relevant for this type of project. Quality of the facilitation process and sustainability of the processes started by the target group are much more important measures than money saving and cheap project implementation. Project start-up processes are always relatively expensive, and it is important not to let cost factors limit/hinder implementation during this phase. For instance, active presence of HQ management in the field can lead to lasting motivation among field staff and cross-fertilisation between Districts, and it is crucial not to limit such activities in order to economise on implementation.

(b) Administration and finance management

TOR item: *to assess the Project accountability*

EEOA's accounting unit keeps records of expenditure and disbursements. Expenses are accounted for on a receipt and expenditure basis. All transactions require the approval of the expatriate National Coordinator. Audits are undertaken on a timely basis by the private-sector auditing company Mark Newton and Company, Chartered Accountants. So far there have been no significant observations and comments. It is reported that transfer of funds from Sweden to Zambia is functioning smoothly and has not delayed project operations.

EEOA received a total allocation of Kwacha 5,485,301,083 for 2000 against an expenditure of Kwacha 4,065,513,350 (74 percent). The figures for 1999 were 4,063,741,896 and 3,494,413,942 (86 percent) respectively.

Operational costs of HQ amounts to 26 percent of the audited expenditure for 2000. Operations of six District units amounted to some 14 percent, REEF infrastructure to 31 percent, facilitation component to 25 percent, and REEF management training to 4 percent.

Major expenditure headings are: infrastructure, vehicle purchase and operation, equipment, staff, office operations, workshops and training activities, travel, subsistence and monitoring and evaluation.

4.4.6 Efficiency of Reporting, Monitoring and Evaluation

TOR item: *to assess the Reporting, monitoring and evaluation efficiency and the relevance/function in the organisational set-up*

EEOA has a good record of reporting, both at HQ and District levels. Reporting from fieldwork is thorough, but seems to be used very little. It is important to make sure that the implementing level benefits from the reporting and is not just left with a heavy duty. This puts the onus on HQ to provide feedback to the District Teams.

Monitoring and evaluation has undergone several changes in methodology since the start of the project in 1995. Unfortunately, this has led to several gaps in available data to support analyses of impact. The baseline data collected at the start of the project does not match well with the impact studies carried out over the last few years. Likewise, the baseline data and the records kept at District level have not been able to provide the relevant information (on changes in individual farmers' incomes over a period of time) for a cost-benefit analysis.

Despite these problems, a cost-benefit analysis (CBA) was conducted in 2000 on the basis of information collected specifically for that purpose. The CBA gives an indication of the level of increase in income, which a group of direct beneficiaries has experienced. There are too many unknown factors, though, to extrapolate these indications to secondary beneficiaries.

At present, monitoring is done on the basis of the six-weekly and quarterly reports from the Districts. The newly arrived M&E Coordinator has worked on including relevant data collection in the formats for reporting from the field, i.e. household profiles and individual action plans. Further work yet has to be done to adapt the data collected to the Facilitators' and the farmers' needs for follow-up.

5. Factors determining sustainability and compatibility

5.1 Compatibility with strategic goals of Swedish development aid and cooperation: Reduction of poverty, promotion of equality, democracy and human rights

TOR item: *to assess the achievements of EEOA in relation to the objectives of Sida's support to agricultural development in Zambia*

EEOA activities are in line with SIDA's objectives for support to agriculture development in Zambia. Many small-scale farmers have been able to increase their production of cash products (vegetables, cereals, pulses, legumes, beverages, etc.) and to strengthen their links to the market. Out-grower schemes have been formed. The infrastructure tasks under EEOA have provided improved rural accessibility and improved marketing opportunities for outlying areas.

EEOA is preparing to target remotely located outlying areas and to adopt a more direct approach to agricultural production, processing and marketing. This will strengthen EEOA's compatibility with SIDA's objectives of improving agriculture development for small-scale farmers, and at the same time address GRZ's strategy of crop diversification and provision of food security.

Equality, democracy and human rights are indirectly, but significantly being supported by EEOA. This comes through the realisation among EEOA target groups that they can gain direct benefits

by organising themselves into interest groups and enter productive dialogue with business companies and local government. The Interest Groups are beginning to demand supporting services from local government, which is reacting in a transparent and democratic manner.

5.2 Relationship to the policy environment

TOR item: *to assess national policies within EEOA's scope of responsibilities and the Project's relevance in relation to those policies (and in the Zambian context)*

This topic is discussed in the Main Report, Sections 2.1 and 2.2.

5.3 Economic and financial feasibility

The Evaluation Team finds that EEOA is both economically and financially feasible. However, it is not possible, or appropriate, to calculate economic and financial rates of returns for a project like EEOA. The project is a pilot project, which aims at starting up facilitation processes leading to socio-economic growth. The facilitation processes and the subsequent agriculture-related small-scale business enterprises are both meant to be replicated to other villages, areas, and Districts.

The economic and financial benefits of the present investment costs for Phase II (SEK 61.7 million) should therefore be seen in a longer time frame. Lessons from similar countries suggest that a timeframe of 10 to 15 years is required to provide a realistic picture of rates of return.

5.4 Validity of institutional relationships and capacity

TOR item: *to assess the intervention methodology in terms of institutional sustainability including extension, financing, micro-credit and marketing*

EEOA is in a process where it, on the one hand, is piloting approaches and processes and, on the other hand, is trying to consolidate lessons learned. The Evaluation Team finds that EEOA has developed an efficient facilitation method which strengthens local capacities for economic activity, but the project will require modifications in design and approach to achieve institutional sustainability (Chapter 6). Such modifications are particularly relevant to extension, micro-credit and marketing, where content and approaches have not been fully developed yet. A possible third phase should therefore include a more direct and holistic approach towards agriculture production, processing and marketing, with rural finance, micro-credit and marketing as prominent features.

5.5 Socio-cultural aspects

EEOA is at the pilot stage, and has so far fitted in well with the existing socio-cultural context. The approach is flexible, and it is not expected that the programme will encounter socio-cultural complications with increased geographical coverage and a larger group of beneficiaries. The concerns raised by the Evaluation Team regarding the risks for subsistence farmers in engaging in business ventures and letting go of a strategy of risk minimisation should be noted and used in formulation of any future phases.

5.6 Responsiveness to the problems of hiv/aids

EEOA has, so far, not responded in a proactive manner to the problems of HIV/AIDS, since it has been piloting approaches and activities through individuals and groups who volunteered to come forward. The flexible approach and structures of EEOA are well suited to respond to the problems of HIV/AIDS within a wider geographical coverage and a larger group of beneficiaries.

5.7 Participation, ownership and responsibility among beneficiaries

EEOA's concept and approaches are based upon full measures of participation, ownership and responsibility among the beneficiaries. During site visits, the Evaluation Team has been able to

confirm that the beneficiaries participate actively in all stages and show a high degree of ownership and responsibility. It remains a question whether the beneficiaries will be able to shoulder the full responsibilities, including their financial implications, for operation and maintenance of the infrastructure and the market links, which have been established.

5.8 Responsiveness to gender-equality

EEOA has applied a highly gender-sensitive approach during its second phase. Female entrepreneurs have been targeted and about one third of staff employed by the project is female. Activities and job functions performed by women are highly meaningful and relevant. Furthermore, the household approach adopted in the facilitation process has significantly increased awareness among men and women about gendered roles, and family members have started to support each other much more.

5.9 Environmental sustainability

It is not found that EEOA possess any serious threat to the environment. It is also observed that EEOA aims at raising awareness of environmental sustainability (Section 4.2.3 and Annex 4).

5.10 Appropriateness of technologies

The project assists in making available information on a range of technologies for production, processing, storage and packaging. The Information Pack elaborated is in high demand. It is the beneficiaries who choose which technologies they want to adopt.

6. Conclusions and recommendations

The Evaluation Team is generally impressed by the achievements made by EEOA. EEOA has proved to be highly suitable in a Zambian context. It is the view of the Evaluation Team that the concepts and approaches developed by EEOA, with slight modifications, are appropriate to facilitate a general rural change in Zambia. The following provides the main conclusions and recommendations for EEOA.

6.1 Key assumptions

EEOA is based on the key assumption that improved socio-economic conditions to benefit small-scale farmers will take place if a critical mass of entrepreneurs is being targeted. The targeted critical mass will be provided skills and opportunities to be able to start-up and manage small-scale business enterprises. It is then assumed that subsistence farmers and other marginalised groups will benefit from the emerging entrepreneurs through a trickle-down effect providing increased job opportunities and farm/non-farm income.

The Evaluation Team has in some cases observed signs in support of the key assumption, but in other cases the improvements achieved by direct beneficiaries did not yet seem to have any significant effect in the targeted area.

It is therefore recommended that the project concept is modified to include a more direct approach to reach the outlying located farmers and potential entrepreneurs, and to place the agricultural dimension in focus as described in the Project Design Document. Establishment of credit lines and marketing structures for the target group and improvement of infrastructure are all important supporting measures to strengthen the sustainability of the processes started.

6.2 Project benefits

It is observed that a large number of the targeted direct beneficiaries (expected to make up the critical mass necessary to create the trickle down effect) experience immediate project benefits.

However, it is still too early to verify whether the EEOA concept in its present form is able to reach subsistence farmers and other marginalised groups through its “critical mass” approach.

As an unintended effect, it is observed that money-strong trading middlemen are active in several of the Districts covered by EEOA, and draw benefits from EEOA in terms of products, cheap labour, etc.. It is also noted that some EEOA-facilitated farmers have developed a strong dependency on the finance and marketing structures provided by the trading middlemen and their agents. Other EEOA farmers are getting very dependent on emerging entrepreneurs facilitated by EEOA such as out-grower managers or individual processing enterprises (oil extraction) and at times have no choice but to accept the prices offered by these entrepreneurs. There is a risk that this tendency will be further strengthened in the future.

It is therefore recommended that EEOA strengthens support to the creation of membership-based organisations for rural finance, marketing and other relevant economic activities, and to ensure that all sub-groups of the overall target group remain actual beneficiaries of project activities.

6.3 Facilitation component at the core of the project

It is noted and credited that the facilitation process is able to bring about rural changes and to assist alleviation of poverty and provision of food security. It is also noted that officials of local government units in many cases view EEOA as a provider of rural infrastructure, and place less importance on the facilitation process. It is therefore suggested that infrastructure and credit activities should only take place if they support the uptake or implementation thrust of a facilitation process. The importance of the facilitation cycle as the primary project activity in the EEOA concept and the role of infrastructure and credit as supporting activities should continuously be stressed to participating communities and Districts.

6.4 Marketing

It is fairly evident that the target group and beneficiaries of EEOA, like those in many other projects in Zambia, are faced with a marketing problem. The producers are unable to find marketing outlets near their locality since many tend to be involved in the same type of business and/or production. As of present, absence of marketing outlets is having a negative and discouraging effect on producers and small-scale traders since they do not see an incentive to increase production or to be involved in local marketing of produce which do not find consumers locally.

This is further being exacerbated by presence of well-established business people, who are often money-strong and in possession of transport facilities to bring produce from farm gate to central and provincial markets. Strengthening of producers’ bargaining and marketing powers is crucial for EEOA activities to benefit the intended target group fully. EEOA is already engaging in improving marketing information, facilitating the creation of producers’ cooperatives and associations as well as improvement of their marketing capacity, construction of storage sheds, etc.. The Evaluation Team recommends that EEOA continues to emphasise this aspect strongly and support the development of farmer-controlled marketing structures which can provide and assure fair deals to small-scale producers. Not until then will EEOA fulfil its mission of promoting viable and sustainable small-scale businesses geared towards increasing agricultural production and productivity in outlying areas.

6.5 Rural finance

Increased production and business opportunities for EEOA’s target group require improved access to credit and loan possibilities. The savings and credit promotion SSDF (Small Scale Development Fund) is being piloted by EEOA in response to the experiences gained during the first six years of project. These revealed (i) credit is needed in farming communities, (ii) no adequate credit facilities

are currently in place in the target areas, (iii) the capacity to save among rural business people and farmers is significant, (iv) savings' schemes only exist in very small numbers and are most successful with business people, (v) credit and saving schemes for small-scale farmers in villages require different structures and modalities, and take longer to establish. It is recommended that additional efforts, including fielding of local and expatriate TAs, are put into effect by implementing and funding agencies, since marketing and credit are key to further success and sustainability of the started-up activities of EEOA. The Evaluation Team proposes that focus is put on village-based savings and credit schemes and on finding appropriate modalities and structures to assist the farmers in increasing their capacity to invest.

6.6 Cost efficiency and effectiveness

It is observed that EEOA endeavours to apply approaches which are as cost efficient and effective as possible. The cost-benefit analysis undertaken in 2000 has been made to investigate the cost effectiveness of the Swedish money spent. While this support is being appreciated, the Evaluation Team would like to stress that, rather than achieving immediate successes in terms of project cost effectiveness, it is more relevant to achieve the creation of viable and sustainable processes in the rural communities which are cost-efficient and cost-effective in relation to the costs and investments made by the beneficiaries involved. The project cost-effectiveness is a goal once a viable model is developed, but not during the phase of model development.

EEOA is faced with a number of challenges in this regard: (i) shifting to more remotely-located outlying areas, (ii) focus on agricultural production, processing and marketing, (iii) strengthening of savings and credit facilities, (iv) support to development of marketing facilities, (v) sustainability of existing and new activities, (vi) cross-fertilisation of ideas and approaches among District staff, (vii) monitoring of key activities by project management etc.. All these are vital operations for EEOA and likely to increase project costs significantly.

The Evaluation Team proposes that the following parameters are applied to measure the future success of EEOA: ability to reach the target group and outlying areas, multiplier effect in remote outlying areas and among resource-poor farmers, increase in agricultural production, increase in number of agricultural processing facilities, number of beneficiaries benefiting from workable and efficient savings and credit schemes, increase in number of marketing facilities, increased household income for the target group, viability and sustainability of organisations, structures and facilities established and strengthened through EEOA efforts.

6.7 Bench mark data and baseline survey

The Objectives and Indicators of the EEOA logframe have not served as an appropriate guide for M&E, and a revised logframe would need to be prepared in collaboration with the beneficiaries in any future programme. Bench mark data collected and baseline surveys made have proven to be inadequate for the present monitoring data needs. It is recommended that the monitoring unit revisit carefully the needs for bench mark and baseline data in order to be able to monitor achievements and measure impact through indicators selected. Bench mark data should mainly be collated by EEOA Facilitators together with the target group using PRA methods. If necessary local enumerators should be engaged for collation of bench mark data.

6.8 Monitoring

It is recommended that the project strengthens and further fine-tunes each of the three tiers in the on-going monitoring process. One is the participatory monitoring in the facilitation areas, starting from beneficiary level, where information collected should directly serve the beneficiaries in their own monitoring (net profit from their activities, resolution of problems arisen, completion of action

plans, etc.). Standard formats for reporting to District level are being elaborated and training will have to be extended to persons responsible. The forms should be filled in on a six-weekly basis and compiled at District level for discussions at the six-weekly review and planning sessions.

The second monitoring instrument aims at assessing whether activities proceed as per plan, whether objectives are being addressed and resources used as intended. This part of the monitoring process is the responsibility of District and HQ staff. This will be based partly on the reports submitted for discussion in the six-weekly review and planning sessions, partly through HQ's regular visits to programme areas.

The third monitoring instrument is management's regular monitoring at field level of key activities and milestones. Here, there can be need for detailed studies conducted by independent consultants, like the impact studies already made.

6.9 Phasing and coordination with other projects

The Evaluation Team finds that EEOA's facilitation process is well suited for the other components under SIDA's support to the agriculture sector in Zambia: LMCF, CFU, MDSP and SHAPES.

It is also found that the reciprocal is applicable. Evidently EEOA could benefit from the pioneering work on farming technologies and established base provided by LMCF in areas covered by LMCF, and from the achievements of MDSP in terms of providing quality seed and creating seed growers associations (Main Report, Section 4.2).

It is therefore recommended that EEOA cooperates more closely with LMCF, CFU, MDSP and SHAPES through quarterly coordination meetings, that EEOA for future operations enters into Districts and Provinces where LMCF, CFU, MDSP and SHAPES already work, and that coordination meetings are regularly held also at District and Province levels.

6.10 Management and coordination

Management and administrative procedures are well established and functioning in EEOA with a close communication between District and HQ levels. The EEOA endeavour to develop workable models for economic expansion in outlying areas requires a tight focus on the individual areas of intervention and on the specific characteristics of each area. The core of programme implementation is at District level. HQ should continue to take care only of the absolute basic coordination and synthesis functions, and let everything which can be taken care of at District level be transferred from HQ. This also applies to technical functions, planning, monitoring etc., all of which should be developed and tested at District level. The regular review and planning meetings of EEOA could take place in the Districts on a rotational basis to promote cross-fertilisation of ideas and to enable EEOA staff to review approaches and activities in other Districts.

As the EEOA concept is expected to be viable for rural development in Zambia, the Evaluation Team recommends that the project adopts a new management structure to facilitate a gradual phasing over of responsibilities to Zambian institutions and organisation. This will enable a faster coverage and replication to take place with the possibility of attracting support from other funding sources, including Zambian ones.

It is therefore proposed that EEOA should adopt one of the following structures: (a) be co-managed with a Zambian and an expatriate being jointly responsible for the project and for the signing of all documents and financial transactions, (b) be managed by a Zambian Co-ordinator backstopped by an expatriate adviser. It is also recommended that the two project coordinators (or the coordinator and the adviser) spend at least 50 percent of their time in the field engaged in technical backstopping and active development of further technical programmes and activities. Added

presence of the two project coordinators in the field and more direct involvement in technical matters will facilitate coordination and assist in fostering team spirit across the Districts.

A local senior administrator with operational base in Lusaka could be employed, if not available within the present staff portfolio, to take care of the day-to-day matters.

Annex 3

Evaluation of the Project: Land Management and Conservation Farming (LM&CF)

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1. Executive summary

1.1 Key findings

- In general concept, we find LM&CF is a project which combines a sound approach, an important mission and set of developed and tested technological packages which have good potential for improving productivity and income among smallholder farmers in Zambia. The Evaluation Team suggests that Sida continue to support interventions and projects which have the same objectives.

The evolution and performance of LM&CF have been heavily influenced by it being institutionally implemented as an integral part of MAFF within the framework of ASIP1 (Main Report, Section 1.2). This arrangement means LM&CF has been obliged to rely on MAFF's capacity to implement it. Because the project is part of an agriculture sector programme, and has been implemented by an imperfectly functioning government institution, several constraints have arisen. To the Evaluation Team, it appears that the fact that LM&CF is within the ASIP1 framework has led both Sida and the TA Staff to have accepted (rightly or wrongly) that project implementation is the responsibility of MAFF. The following matters appear to reflect this situation:

- (a) A rushed and incomplete project planning led to a generally weak project document which does not specify with sufficient clarity the ways in which it is to be implemented. For example, it contains no clear justified arguments as to why key project activities (agricultural extension, monitoring and evaluation, management of the funds and auditing) are to be the responsibility of MAFF.
- (b) An imperfectly functioning supervisory structure (seen as a MAFF responsibility) has made it difficult to take action when problems have arisen, for example, in unclear reporting, doubtful financial management, auditing or suspected non-performance among field staff. Not all of these problems have been occurring all the time. But the structure has made them difficult to remedy when they have happened.
- (c) The absence of a conventional and consistent log-frame (specifying Results, Indicators for the Results, and Activities which are logically organised to lead to those Results) has, in our view, been a main constraint contributing to (a) and (b) above. Because of this, LM&CF has missed having integrated project cycle management routines in place for planning, reporting and monitoring of the project.

The Evaluation Team considers that the arrangement whereby a project supports implementation of a defined agriculture sector programme should not compromise the deployment of efficient objective-oriented project management practices. We consider Sida should ensure that all projects, including those implemented as parts of an agriculture sector programme, should have project documents which follow standard management formats, ensuring that the projects have the tools for efficient monitoring, supervision and steering.

- LM&CF's work in the introduction of new cultivation practices is entirely dependent on an efficient and well-functioning extension service which will extend those practices on the ground (Reference 151, pages 10 and 11). Presently, LM&CF is wholly dependent on MAFF extension services. Over recent years, the future role of MAFF extension service has been vigorously debated within Zambia. Individual opinions vary widely. But one commonly held view is that major changes are going to occur over the coming years, involving new, more cost-effective ways of providing extension, and new partners (public-sector, private-sector and NGOs) in its provi-

on. In this situation, the imperative becomes the exploration of these new options in as efficient and speedy a manner as possible. Speed is required because, as noted above, new technologies (e.g. the conservation farming group of technologies) with substantial potential for benefiting smallholder farmers have been developed, and it is the matter of extending them that presently stands in the way of their widespread adoption.

In this situation, we see good potential for a continuation, an opportunity in line with the emerging ASIP successor programme. The continuation could well be more experimental, involved in trying out new approaches and supporting MAFF in piloting new institutional solutions for the implementation.

- Monitoring and evaluation of LM&CF has been difficult, a situation owing in large measure to a lack of clearly articulated log-frame Outputs and Indicators.
- The technologies which LM&CF have been promoting (i.e. various soil fertility improvement technologies, farm forestry, erosion control technologies, range and pasture management and water harvesting technologies) are considered highly relevant and valuable for sustainable future farming and rural livelihoods in Zambia. The technologies are environmentally friendly. In this regard, LM&CF is considered to have been highly relevant to the Zambian and Swedish policies of reducing poverty and food insecurity, and of developing better, sustainable smallholder farming systems. During the last years the focus of the project has shifted from the land management practices towards conservation farming. The results and potential of conservation farming appear very promising. The technology has shown it is possible (a) to increase and secure yields both during droughts (by conserving water) and (b) with appropriate measures, to ensure normal yields during years with too much water. A problem with all promoted technologies is the initial labour requirement in the implementation, e.g. establishing the pot-holes in the first year for conservation farming. This can be a limitation for e.g. female-headed households or households which are resource-poor or have sick family members who need care. However, the labour for several of the promoted technologies can be spread out and be done during slack periods.

1.2 Achievements

Within the institutional and organisational framework described above (and in spite of their limiting influences), we consider LM&CF has made a major contribution:

- With LM&CF assistance, MAFF Field Services have set up convincing demonstrations showing two to three-fold yield increases (over traditional methods), without fertiliser on poor soils. The technologies are directly applicable to smallholder farms. By adopting the land management and conservation farming technologies which the project promotes, smallholder farmers are able to break their dependence on inorganic fertiliser.
- Substantial positive impacts of the project were witnessed on many of the visited farms by the team. Impact studies carried out by LM&CF have demonstrated efficiency, in the sense that the investments in the project are likely to have considerable potential to increase productivity and economic returns in the smallholder agriculture sector.
- Effectiveness has been demonstrated in LM&CF in the form of generally well-functioning project HQ operations, in the administration of funds and in the processing of reports from the field. These have enabled the free flow of funds to the Districts and the field.
- The broad experience of the LM&CF TA team has been generally well deployed, allowing effective links with technical partners, e.g. CFU and RELMA. This has ensured that the project has been up-to-date with new technologies.

- Many of the farmers consulted by the Evaluation Team were convinced about the positive impacts of the introduced technologies.
- LM&CF has had a positive environmental impact. It supports sustainable land use, reduces burning crop residues, improves the recycling of soil nutrients, reduces erosion and is reducing farmers' dependence on inorganic fertiliser.
- LM&CF has appropriately included gender aspects into its activities. Substantial preparatory work and training has been done to mainstream gender in project activities. LM&CF still needs to do more follow-up work in the field, particularly in assisting extension staff to use what they have learned.

1.3 Areas of concern

- The Participatory Extension Approach (PEA) was still considered weak in many of the visited camps. More emphasis needs to be placed on changing the attitudes and motivation of the extension staff.
- During field visits, it was noted that some farmers do not fully understand LM&CF farming concepts, even though they are applying them. A technology which is partly or inappropriately launched may lead to poor results, undermining the spreading of the technology itself. This applies in particular in the case of a range of technologies, such as the conservation farming group.
- LM&CF's monitoring and evaluation system has been working in a very difficult environment. Lack of clearly defined Outputs/Results, and Indicators to match them, essentially undermines an objective approach to monitoring and evaluation, as well as to project management.
- Difficulties have also arisen in the recording and measurement of adoption rates. It is unclear exactly what each adopter has adopted, and whether he/she has sustained that adoption. An assessment of overall impact has been attempted, but the assumptions concerning increased productivity, both among adopters and through the multiplier effect, are doubtful. In our view, LM&CF should, over the remainder of its duration, explore further ways and parameters for measuring productivity, change and adoption. LM&CF have made a start on this work with the establishment of Farm Registers and a baseline study (2000). Before this, no baseline data existed.
- Absence of defined Results has made regular reviewing of progress in quarterly and annual reports very difficult. In consequence, the process of reformulating and adjusting Activities during project implementation has been guided, and has become somewhat haphazard. At present, the project reports do not tell the reader which objectives are being achieved. In cases where problems arise, it is difficult to take appropriate corrective measures because the Results and their Indicators are missing.
- A more clearly defined target group of farmers would probably have improved the orientation of appropriate methods and methodologies to the targeted population. In our view, a clear strategy of targeting stronger, resource-rich farmers as early adopters would have improved the focus and overall results in demonstrating to farmers the advantage of the new technologies.

¹ Have an improved and sustainable productivity of farms and agricultural lands for higher overall agricultural development (Land Husbandry Sub programme ASIP 1).

- The implications of HIV/AIDS are presently not being systematically addressed by LM&CF. For example, the high demand for labour, especially in the initial stage of establishing conservation farming, is likely to limit adoption among households who have sick family members.

2. The subject of the evaluation

2.1 Scope

LM&CF and its predecessor SCAFE have a long history of continuous operation since 1985. At the start of the present phase (1999–2001), the name was amended to LM&CF to reflect a change of direction, away from Soil Conservation and Agro-forestry Extension towards Land Management and Conservation Farming. The project is, in its design, a support programme for the Ministry of Agriculture, Food and Fisheries (MAFF) under the sub-programme for Land Husbandry within the framework of the Agricultural Sector Investment Programme (ASIP1).

LM&CF covers four Provinces: Eastern, Central, Southern and the Lusaka Provinces. It works in twenty Districts (Main Report, Table 5.1). At an early stage of the present phase, LM&CF decided to concentrate its activities in 98 camps, instead of the previously targeted 586 camps. The idea was that reaching a critical mass of adopters would be a more sustainable and more cost-effective approach, rather than spreading its activities too thinly.

LM&CF's Overall Objective: *Improved and sustainable productivity of farms and agriculture lands* and Immediate Objective: *Improved land husbandry practices among farmers, with special emphasis on smallholders*, reflect the objective of the ASIP1 Land Husbandry Sub-programme¹. In order to reach these objectives, LM&CF has four main groups of activities:

- a) Management and co-ordination
- b) Farm support
- c) Staff training
- d) Education and public awareness

Through LM&CF activities, a wide variety of technologies for improved land husbandry and farming practices are being spread. These include improved fallow, green manure, cover-catch crops, kraal manure, composts, use of crop residues for mulching, crop rotation, establishment of contour bunds, vetiver grass strips, farm wood-lots and orchards. During recent years, the single most important development has been the introduction of the conservation-farming group of technologies.

LM&CF's main focus is on farm activities at household level, working through interested farmers groups. A planning process at camp level, with the various farmers groups, is implemented in a participatory spirit. The Participatory Extension Approach (PEA) is now also the official extension approach of MAFF and is being replacing the Training and Visit (T&V) approach.

Sida is the major financier of LM&CF. Government of Zambia also contributes financially to the project (although the Evaluation Team did not obtain figures on this support). The budget funds from Sida are in three main categories:

1. Consultancy services, based on a contract between MAFF and the consultancy company Orgut.
2. Procurement
3. MAFF District and Provincial funds

The table below shows the project's (Sida) budget utilisation over the period 1999 to 2001.

Budget utilisation, Million SEK

	1999		2000		2001	
ITEM	Budget	Used	Budget	Used	Budget	Estim.
Company & Costs overseas	2,3	2,4	2,5	2,4	2,5	2,4
TA International	3,5	3,0	2,5	2,4	2,7	2,6
TA Local	1,3	1,2	1,5	1,6	2,1	2,0
TA Reimbursable	2,7	3,0	2,3	3,2	2,1	1,7
HQ Operation (PSO) & Training	3,5	3,4	4,6	4,1	3,6	4,3
Provincial level	0,2	0,2	0,2	0,2	0,3	0,3
District level	1,3	1,3	0,8	0,9	1,1	1,1
Camp level	-	-	0,8	0,6	1,1	1,1
TOTAL	14,8	14,6	16,1	16,5	15,5	15,5

2.2 Institutional set-up

LM&CF is in its design a support programme to the Ministry of Agriculture, Food and Fisheries (MAFF) under the sub-programme for the Land Husbandry Section, Technical Services Branch, Department of Field Services, MAFF. Within MAFF the project is an integral part of the Agricultural Sector Investment Programme (ASIP1).

At National level, LM&CF HQ is headed by a National Project Coordinator, assigned by MAFF. At HQ level the project has two international and three local consultants assigned to the project. HQ is primarily concerned with coordination, policy and technology development, back-up services for the field, monitoring and evaluation, and the provision of training and services in special areas. Project HQ also compiles reports for MAFF and Sida, and oversees the work in the Provinces and Districts.

A provincial team supports the Districts by providing technical back-up support, training and coordination of reporting, monitoring and evaluation activities in the Districts. A Provincial Coordinator, who is supported by a consultant advisor (not in Lusaka Province), heads the provincial team.

At District level, District Implementation Teams are led by the Senior Agricultural Officer and coordinated by the LM&CF District Coordinator. The LM&CF District Coordinator is responsible for the preparation of monthly work plan which is a compiled plan consisting of the sum of the planned activities from all the camps in the District. Of the funds coming down to District level, 50 percent is going directly to the activities at camp level. The farmers with whom the project works are directly involved in the dialogue concerning how the camp budget is used in practice.

A consultancy company (Orgut) provides back-up services for LM&CF from Stockholm. Orgut is providing the project with seven advisors (four international and three national), a Liaison Officer and a Procurement Officer.

LM&CF's institutional set-up was one of the issues, which was comprehensively debated during the fieldwork of the Evaluation Team. On one hand, it was often claimed that by working as an integrated part of the MAFF, LM&CF is able to draw efficiently on a large group of extension workers in the camps with a wide geographical coverage. On the other hand, the evaluation team was told on several occasions that the extension system generally did not perform well.

MAFF's performance at camp level was both praised and criticised. The Evaluation Team's impression was that the quality of work and the commitment among the extension staff varied greatly between the various districts and camps visited.

3. Purpose, methodology and limitations

3.1 Purpose

The purpose of this Evaluation is to provide an independent view on the performance of the project, as part of Sida's support to the Zambian agriculture sector. The Evaluation discusses in its Main Report the present policy environment and the linkages LM&CF has with the other Sida-supported projects and other donor interventions.

3.2 Methodology of the evaluation

The Evaluation has taken, as the starting point, the LM&CF project document (Reference 429), and is from that point of view trying to answer the questions raised in the Terms of Reference of the evaluation mission. The Evaluation included almost two weeks of field visits (in Northern, Eastern and Southern Provinces), simultaneously reviewing the LM&CF, EEOA and MDPS projects. In the field, relevant authorities were met and several of the participating communities were visited. The Evaluation team also met with the relevant authorities, NGOs and donors in Lusaka.

In this report the issues raised in the terms of reference are divided into assessments of LM&CF's:

- Relevance
- Impact
- Effectiveness
- Efficiency

3.3 Limitations of the evaluation

A main problem for the Evaluation Team in making an objective assessment of LM&CF was the lack of a standard log-frame, and the lack of systematic approach in the project document. This situation has resulted in project management which is not properly guided. This makes assessment difficult, because the things which should be assessed are not clearly specified. LM&CF has a lot of good documentation that makes up interesting reading material. However, the lack of a logical framework has meant that the Evaluation Team has had little guidance in learning to understand the project.

4. Evaluation issues

Section 4.1 is a brief discussion of LM&CF project design, approach and methodology. Sections 4.2 to 4.5 then address details of the project in relation to relevance, impact, effectiveness and efficiency.

4.1 Project design, approach and methodology of implementation

4.1.1 Project Design, General Approach and Overall Performance

In general terms, the Evaluation Team sees LM&CF as a very positive, forward-looking project. The strategic choice, made by Sida in the 1970s, to support research and implementation of land management and conservation is now bearing fruit, with packages of technologies and good practices now available which improve the productivity of smallholder agriculture in Africa. The scope of LM&CF is based on an approach wherein the implementation components have been

developed and shaped in a long process. The Evaluation Team therefore concludes that LM&CF has a sound technical approach, and has an important mission to achieve. The approaches of acting hand-in-hand with the research institutes (like ICRAF), and allowing farmers to develop, test and learn “best practices” in cultivation and land management is considered directly appropriate to the building of sustainable farming practices in Zambia, for improved food security and livelihoods among the smallholder farmers. The Evaluation Team suggests that Sida continue to support interventions and projects for improved, sustainable agriculture productivity among Zambian smallholder farmers which draw on the positive experiences gained from LM&CF and SCAFE.

4.1.2 Integrated Project Cycle Management (IPCM) and Project Log-frame

This section includes some discussion about log-frame and IPCM approaches. The Evaluation Team would like to stress that even the best log-frame does not guarantee a successful project. However, we would like to stress that a good log frame can be of great assistance, especially when it is combined with the Integrated Project Cycle Management approach. We would also like to stress that the most important criterion for a good log-frame is the fact that it is prepared together by all project stakeholders – the beneficiaries and the people responsible for implementation, coordination and supervision – in a participatory way which ensures that it is both understood and agreed by all the stakeholders. We suggest that this would be done during the planning process of a new project document.

A significant problem for the Evaluation Team in making an objective assessment of LM&CF was the lack of a conventional log-frame. The problem has been created through a somewhat haphazard project document preparation (see below). In this case, incomplete formulation in the project document has led to a situation where the project management has not had at hand the tools they required properly to guide the project in a systematic way. The LM&CF management team has tried to address this situation through updated versions of log-frames which have been included in various documents over the past two years (References 401, 404, 410 and 414). A more complete log-frame was presented in Reference 414, and this is a point of reference for getting the project streamlined over the remainder of its duration. The Evaluation Team suggests the following in further developing the log frame:

- a) The work is done in a participatory manner, getting on board as many of the beneficiaries and other stakeholders as possible
- b) Fewer Results be selected. Presently, nine Results are articulated, but several of them are written in the form of Activities. Choosing these Results will be very important for future management of the project.
- c) Objectively Verifiable Indicators should be chosen with great care and in collaboration with the M&E unit. It is proposed that some qualitative indicators be included which could be measured through the farmers’ own participatory monitoring and evaluation activities.
- d) The present important Assumptions should also include Risks. Reference to a standard log-frame manual (e.g. Reference 20) is useful to identify appropriate Assumptions and Risks.
- e) The project management, reporting and the M&E activities are all streamlined according to the new log-frame.
- f) Finally, it is suggested that an experienced log-frame consultant is employed (for about two weeks) to facilitate the process of developing a new log frame for the remainder of the project duration.

The project document of 1999 does not specify the expected Results of the project nor does it provide Indicators for expected Results. In consequence, LM&CF project management has not even had the chance to adopt the Integrated Project Cycle Management as their management and reporting system.

The lack of a systematic approach becomes evident when reading some of the LM&CF work plans and reports. In some cases, the reports and work plans do not link up, either with the Objectives and Results of the log-frame or with each other. Activities described in the work plans do not correspond directly to expected Results, and, in consequence, there is no objective indication in the reports as to whether or not the project is achieving its Objectives and its Results. Problems or reasons for not achieving targeted activities and Results are not discussed, neither are suggestions for corrective measures mentioned in the reporting. In turn, the work plan does not reflect problems or corrective measures suggested in the previous report. The lack of Assumptions and Risks in the project document also makes it difficult to assess how and why strategic choices have been made, and how to take account of external factors which influence the project.

In consequence, reviewing of progress in quarterly and annual reports is difficult. The process of reformulating and adjusting activities during implementation is not guided, and easily becomes haphazard. At present, LM&CF reports do not tell the reader which objectives are being reached. In cases where problems arise, it is difficult to take appropriate corrective action because the Results and their Indicators are missing.

4.1.3 *The Planning of LM&CF*

LM&CF have faced problems which stem from the way it was planned. The Evaluation Team learned that the present project document had been generated in two weeks after MAFF informed the project staff that Sida urgently needed a new project document. The project document which is now being implemented is, thus, an edited update of the previous document. It has several weaknesses including:

- it contradicts itself on several issues,
- it describes various approaches and activities without referring to the expected Outputs/Results. Thus, the listed activities are not logically organised in a way which makes it clear exactly what the project wants to achieve with each activity, and how they fit together.
- it specifies indicators mainly for Activities. (For example, “8000 CEO farmers visited”, is reporting on the implementation of a plan, and is not an indicator of achievement; 8000 CEO farmers increase their income by 20% could be an Output Indicator for an specified Output aimed at increasing CEO farmers’ incomes. In other words, the increase in income is a valid Indicator, but the number of visits is not).
- it does not specify the target group in a clear manner.

In the monitoring and evaluation section of the document (Reference 431, page 38), it is stated “*The starting point of the monitoring format is the LFA matrix for LM&CF. From an LFA matrix it is possible to start with the project Purpose and the project Outputs and decide upon what should be monitored. This will form the starting point for all planning, reporting and monitoring. There will be two levels of monitoring of adoption (Project Purpose) and monitoring of activities (project Outputs and Activities)*”. No such matrix was found in the project document, neither does it contain clear statements of the stated project Purpose or its Results.

We have to say that we are somewhat surprised that Sida has accepted such a project document, and that no action has been taken on these matters through supervisory channels.

4.1.4 *Two Examples of LM&CF Attempts to Deploy a Log-frame Approach*

Example 1: An outline logical framework is presented in the document entitled Component Activities and Budgets (Reference 431, pages 46 to 51, Table 5). In this document, all assumed project Activities are listed with accompanying performance indicators, e.g. number of meetings, number attending, number of demonstrations, etc.. However, this leaves a gap in the project logic. Specifi-

cally, it is not clear what the aim of these Activities is, since the Results have not been defined. Equally, it is not clear what the Activities “8000 CEO farm visits” and “planting of 10,000,000 vetiver grass splits” are contributing to in terms of project Outputs/Results. The Evaluation Team concludes that such Indicators may be used in work plans, but they cannot be used to assess whether a complex three-year project is moving towards its objectives or not.

Example 2: The following example illustrates the problem created in project management, planning and reporting. In the Annual Report for 1999 (Reference 426), three different Results/Outputs number 1 were specified by three individual Advisors. One would assume that there is only one Result/output number 1 towards which all the various advisors work is contributing. Instead, each advisor has seemingly developed his/her own workplan log-frame based on their personal perception of their terms of reference. As seen below they do not refer as such to the project Development Objective and/or Purpose. The example below highlight the lack of a common reference point towards the project:

Advisor	Result/Output no. 1
Senior Advisor (Team leader)	Good local knowledge of situation and ongoing activities
Advisor Southern Province	The new LMCF component well integrated into the extension system
Advisor Eastern Province	Empowerment of farmers' groups, individual farmers and extension officers in decision-making and implementation and monitoring of field activities

Summarising the views of the Evaluation Team, lack of Indicators, base-line data, a consistent log-frame and a management which draws together the LM&CF Objectives in an Integrated Project Cycle Management have all contributed to difficulties in monitoring overall progress of LM&CF, and in taking key decisions on project direction and emphasis at times when such decisions have been needed. Such decisions could relate to the possibility of experimenting with different extension approaches, inclusion of a marketing component and/or possible modifications of the project approach and methodology. But, the lack of clearly defined reference points and a common understanding of the project Objectives have meant that the Steering Committee and the project management have not had a solid base for informed decisions. Thus, the project M&E unit, project management and external evaluators have had difficulties in analysing the changes which have occurred.

4.2 Relevance

We conclude that LM&CF is highly relevant to Sida's goals on poverty reduction through its promotion of technologies which are able to increase productivity of smallholder farming. The strategic choice made by Sida in the 1970s, to support technology development on a broad base in Eastern and Southern Africa is now bearing fruit in form of programmes like LM&CF in the form of solid, well-tested technical solutions to offer to smallholder farmers. Based on our observation of several encouraging developments in the field, we conclude that a real process of change has started on many smallholder farms, where environmentally friendly and sustainable farming practices are providing improved livelihoods by increasing the productivity of the land.

LM&CF relevance to Zambia's agriculture sector is obvious. LM&CF is an integral part of MAFF. Conservation farming, together with the other land management technologies which the project is introducing are the same as the ones MAFF is promoting nation-wide through its extension service.

The technologies which LM&CF are propagating are considered highly relevant in their positive impact on poverty reduction and the development of environmentally sustainable farming. With LM&CF assistance, MAFF Field Services have set up convincing demonstrations showing two to three-fold yield increases (over traditional methods), without fertiliser on poor soils. Further, the technologies are directly applicable to smallholder farms. By adopting conservation farming technologies, smallholder farmers are able to break their dependence on inorganic fertiliser. However, a limitation is the high demand for labour, especially in the initial stage of establishing the technology.

LM&CF also emerges as relevant from the financial point of view. Impact studies carried out by LM&CF have demonstrated efficiency, in the sense that the investments in the project are likely to produce a positive financial result. If the assumed number of adopters is correct (Section 4.3), the technologies can be said to have had a major positive impact in increasing productivity of land and the profitability of the smallholder farming.

4.3 Impact

TOR item: to assess the *adoption rates* of the techniques propagated by LM&CF by farmers and extension staff

TOR item: to assess multiplier effects of the Project, i.e. adoption of LM&CF techniques by farmers and organisations, which are not participating in the Project

In Section 4.1, the problems stemming from a lack of expected Results and Indicators are discussed in detail. In this situation, objective assessment of LM&CF impacts becomes distinctly difficult. However, the Evaluation Team would like to emphasise that, while the validity of the LM&CF's data can be questioned, it is our impression from visiting a large number of farmers, that the project has had a clear positive impact on the long-term returns to both land and labour. The real long-term impact would be a permanent change to sustainable farming practices and improved productivity and livelihoods of the target group.

To date, LM&CF has largely been concentrating on “adopters”. However, it is unclear exactly what each adopter has adopted, or whether he/she has sustained that adoption. Assessments have been undertaken in attempting to measure the overall impacts (Reference 412), but the assumptions concerning increased productivity, both among adopters and through the multiplier effect, are still doubtful. It is the intention that a new more detailed case study will be done in 2001 in order to come up with results which are more reliable.

Recently, LM&CF has taken steps to secure better information. These steps include improved reporting formats and the carrying out of studies and surveys. However, by LM&CF's own assessment, the results and the reliability of the data cannot be considered wholly consistent. There are several reasons why measuring adoption rates and multiplier effects have proven difficult.

First, the poor quality of the project document, and in particular, the absence of a consistent logical framework for the project, have undermined the establishment of an efficient and useful M&E system.

Secondly, the impact of LM&CF is very difficult to distinguish separately because LM&CF is only one among several other projects and interventions which are (or have been) disseminating the same messages and technologies. For example

- The promoted technologies are official GRZ established priorities which are propagated all over Zambia. Many other organisations, in addition to MAFF, are working with the same technologies in the same areas, e.g. World Vision, ICRAF, LWF, DAPP, PAM, CLUSA and CFU.

- The technologies have initially been developed by institutions like ICRAF and CFU, who should be able to claim their share of responsibility for the results.

Thirdly, reliable recording and measurement of adoption rates and yield increases among adopters has proved difficult. The LM&CF approach of providing a basket of choices for farmers complicates measurement of the impacts. The question of how to measure the adoption of crop rotation is one example. In this case, crop rotation has always been part of traditional farming systems in Zambia. The use of crop rotation diminished in the national drive for mono-cropped maize in the 1970s and 1980s.

The Evaluation Team's conclusion is that the lack of baseline data and a set of verifiable indicators at the start of the project has undermined the function. In our view, LM&CF should, over the remainder of its duration, explore further ways and parameters of measuring productivity, change and adoption. This work has been started with the establishment of Farm Registers and a base-line study (2000). Also in 2000, a study was carried out to measure the multiplier effect, but this study was not regarded as successful.

4.4 Effectiveness

TOR item: to assess the achievements of LM&CF in relation to its stated objectives

By the parameters defined at the outset, effectiveness of LM&CF can be measured in terms of the degree to which the project has managed to contribute to improved land management practices. On many farms visited this was indeed the case. However, the Evaluation Team also visited farms where the technologies clearly had not been understood by the farmers. LM&CF has reported a steady increase in the number of farmers participating and adopting the promoted technologies, and studies carried out provide evidence for increased economic returns to adopting farmers (Reference 412).

Effectiveness was demonstrated in the form of generally well-functioning project HQ operations in the administration of funds and in the processing of reports through which the flow of funds to the district and field has been ensured.

From the resource-poor farmers' perspective, LM&CF provides a solution for increased production based on the farms' own resources, by using the knowledge and skills propagated by the project.

Effectiveness was also demonstrated through the establishment of many good quality demonstration sites in the field. This was witnessed in most places visited by the Evaluation Team. Many of the farmers consulted were convinced about the positive impacts of the introduced technologies. Most of them stated that they were able to replicate the methods themselves, and could also demonstrate them to other farmers in full, without further help from the extension agent.

TOR item: to assess the *technical approach* adopted by the Project for increased land productivity in relation to other techniques and methodologies, particularly in the Zambian Context

The technologies used have proved to increase land productivity, and are well suited for smallholder farmers. LM&CF has been able to show that, by using conservation farming methods, yield can be increased by 2 to 3 times compared to traditional methods, without fertiliser and on poor soils. By adopting conservation farming technologies, smallholder farmers are able to break their dependence on fertiliser. It is said that eighty percent of Zambian farmers do not now use any purchased inputs. The main problem for the vulnerable poor smallholder farmer is the high demand for labour, especially in the initial stage of establishing the technology.

Impact studies carried out by LMCF have demonstrated that there is a huge potential for increased economic return, *provided the technologies are widely and fully adopted*.

TOR item: to assess the geographical coverage, i.e. the size of the intervention within the possibility of the Project?

The geographical coverage is quite broad. LM&CF operates in twenty Districts and 98 camps (in Eastern, Southern, Central and Lusaka Provinces). The number of farm households in the supported camps is estimated at 60,000 (Reference 404). The implications are that the LM&CF impact is not as wide as the number of Districts suggests. Twenty Districts is more than one quarter of Zambia. But 60,000 farmers (while a large figure) makes up less than five percent of farmers.

One of the studies carried out revealed that in the Eastern Province slightly fewer than 13,000 households had been reached. However, the very broad definition of the target population makes an objective measurement difficult. The target group is defined as 10 to 50 percent of total farmers in the project area (Reference 430). Estimating from that range, LM&CF would reach between 17 and 84 percent of the targeted population, depending on the figure used for the target population.

In a previous phase of the project, the number of camps had been 586. It was considered that project efforts were being spread too thinly, and that a new focus on reaching a critical mass in fewer camps would be a wiser approach. At that stage the number of camps was reduced to 98. The Evaluation Team agrees with this change in approach. At the same time, it is noted that the “critical mass” has still not been defined, and that there is no real evidence that such a mass has been reached to date. LM&CF management considered the project could handle at least twenty more camps under its present regime of support and, as a result, project activities are presently being expanded.

Concerning LM&CF budget utilisation, it is evident that only about 12 percent of the budget are de facto used at Provincial, District and camp level (excluding some investments). This is, however, the level from which the final impacts of the project should emanate. Even if this comparison does not take into consideration the full scale of costs (e.g. investments), the proportion of the budget used at these lower levels is still rather small. The Evaluation Team is of the opinion that, in any future intervention of this type (Main Report, Section 5.5.3), the percentage of funds going to the work at the grassroots, District and camps, should be raised to at least 20 percent. By doing so, it should be possible to gain an increase of 50 to 100 percent in the number of camps involved.

TOR item: to assess the organisational set-up. Should LMCF be integrated within MAFF, or are there other possibilities

The evolution and performance of LM&CF has been heavily influenced by its conception as part of ASIP1. This meant that LM&CF were obliged from the start and throughout to depend on MAFF's capacity to implement the project's activities and rely on MAFF provision of necessary back up services. The project document specified many of the key tasks of project management that were considered as MAFF responsibilities, but were not being performed and therefore required changes in the implementation process. Such key functions included (a) management of finances and financial reporting through FMU, (b) management of the monitoring and evaluation function of the project, and (c) extension on the ground.

Institutionally, LM&CF has been part of MAFF. The advantages and disadvantages of this arrangement have become visible to the Evaluation Team on a number of occasions. On the positive side, integration with MAFF means broad coverage and a proportionately larger GRZ contribution

in form of salaries and staff to the project. In several Districts and camps, evidence was found of skilled and motivated extension staff. On the negative side, this evidence was not found everywhere. Further, the current problems of LM&CF in performance and financial reporting are matters of substantial concern. During the field visits, there were many reports of poor performance at field level, with the main reasons being both poor motivation and/or technical knowledge of the extension staff. Furthermore, many camps were also missing extension officers (especially in Eastern Province), although this did not apply in areas where LM&CF was working.

At HQ level, the most problematic areas were the financial management services provided by FMU. Following a long period of problems with slow fund transfers and poor reporting, it was agreed in June 1999 that management of the funds would be taken over by the consultant. Since then, the flow of funds has been smooth. In the annual report 1999, it was predicted that the year to June 2000 would mark the first 12 months in LM&CF's history during which the agreed funds in the budget would actually reach the field level. This has obviously given encouragement among the field staff. Staff in the Districts visited by the Evaluation Team expressed their satisfaction with the present financial arrangements.

A further problem area was the ASIP monitoring function, which was not able to perform as had been envisaged in the project document. As a result, LM&CF PSO has taken over all M&E and data management functions. A reading of the LM&CF reports from the period reveals that a lot of energy has been put into improving reporting formats and getting some hard data collected concerning the ongoing work. However, while a lot of effort has been invested in staff training and production of guidelines for reporting, the quality of the reporting, although improved, has remained a problem. The Evaluation Team concludes that poor, delayed and inaccurate reporting is often a symptom of problems in implementation. The lack of "muscle" to react to unsatisfactory reporting and poor budget discipline on the part of the PSO makes improvement in reporting quality and data collection difficult. It is considered LM&CF should have had a wider range of executive powers and mechanisms such as direct auditing of funded field activities.

The institutional set-up of LM&CF as an integral part of MAFF led to other problems. From the outset, project reports have continuously mentioned the problem of rapid staff turn-over and lack of institutional memory in the Districts and in the project. There is a contradictory side to this statement. Because LM&CF is part of the MAFF institutional set-up, MAFF should provide the institutional memory and continuity. The fact that this has not turned out to be the case raises serious concerns in the mind of the Evaluation Team. If the general consensus within MAFF is getting towards a conclusion that agriculture extension in its present set-up at District level needs to be reformed, the question should be raised whether external support to a non-sustainable service institution is, in practice, simply slowing down the evident evolution of alternative sustainable institutional arrangements.

The strong linkage of LM&CF with MAFF has had an additional limitation on LM&CF's scope to be proactive and creative. Development by definition is a creative and evolutionary process, in which governments require to change and modify the ways in which they work. Being part of an agricultural sector programme should serve the government's need to pilot new ideas and institutional arrangements. Projects are excellent vehicles to spearhead development.

One of the most widely discussed topics within MAFF over the past two years has been the performance, cost efficiency and future role of the extension service. In the field, the Evaluation Team found very wide variation in the performance of the MAFF extension system at camp and farm levels. On the one hand, the Team met a number of very committed and skilled extension staff. In

other camps the messages were clearly not reaching the farmers. This wide variation is through to stem mainly from different levels of commitment among field staff. Certainly, more emphasis needs to be placed on changing the attitudes and motivation of the extension staff.

Our finding, (supported by various meetings in MAFF Lusaka, including the Extension Department) is that MAFF extension service is likely to undergo a major restructuring in the coming years, and new more cost-effective ways of working will be developed. The Evaluation Team is of the opinion that LM&CF could actively start, initially on a pilot basis, to be involved in trying out new approaches and to reassess its institutional set up for the future. This should be done in line with the emerging new agriculture sector programme (Main Report, Section 5.5.3).

Further problems of the extension staff mentioned to the Evaluation Team were lack of adequate transport, poor housing conditions, poor salary and lack of incentives. The symptoms of this unsatisfactory situation were reflected in problems like poor reporting on activities and fund utilisation, and poor budget discipline.

LM&CF has been introducing a participatory extension approach. At present, the participatory work performed is still very weak on the ground in many of the visited camps. However, the institutionalisation of participatory approaches in MAFF is a challenging task which could easily be done simultaneously with trying out new approaches and schemes like commercialisation of the services themselves.

4.5 Efficiency

TOR item: to assess the Project *administration and cost-effectiveness* (cost-efficiency), including channelling of funds from MAFF to the Districts

TOR item: to assess the Project accountability (which we take to mean the Project accounting system)

The efficiency of the general administration of LM&CF (fund flow and financial reporting) has improved over the duration of the project. This improvement is due, both to better management of MAFF, and to the transfer of some responsibilities from MAFF to the consulting company. The presentation of costs on a per-activity basis enhances the capacity of management to compare performance in different Districts and look out for unusual results. This system is considered appropriate and improves the efficiency of the project.

During 1999, LM&CF had severe problems in getting the funds to the Districts. FMU (MAFF) were unable to perform, and irregularity in the flow of funds reportedly undermined staff motivation. Since June 1999, when the consultant took over responsibility of managing funds, LM&CF has demonstrated efficiency by ensuring that funds are transferred to the field on a timely basis. Staff in the visited Districts informed the Evaluation Team that funds have since arrived without delay, provided the appropriate reporting has been done. The LM&CF policy is to ensure that funds are disbursed in the beginning of each quarter, upon verification of reports.

Following the change outlined above, MFU (MAFF) retains the responsibility for undertaking audits. In practice, audits were very late in 1999 and 2000, undermining the Project's capacity to take any necessary management decisions which arise from the audits. In February 2001, MFU (MAFF) claimed to have improved its operation, and promised that an audit report for year 2000 would be ready by June 2001.

The Evaluation Team found that at Camp, District and Provincial levels, reporting on both activities and fund utilisation is still often poor. Combined with inadequate budget discipline and lack of executed control mechanisms at District level, this has created substantial concerns in the minds of

Evaluation Team members. A specific problem has been faced by LM&CF in ensuring staff responsible for quality assurance at District level check the reports thoroughly before approving them and forwarding them to the HQ. To improve cost-effectiveness of LM&CF's supported activities, the Evaluation Team suggests that limited internal audits of the field operation would be likely to improve efficiency of the project and transparency of its operation.

LM&CF is to be commended for making the decision that 50 percent of the District funds are for camp activities, and that the farmers henceforth have a direct say in the use of these funds. The team was told in the field that this change has greatly improved the achievements of the camp officers and the efficiency of the project. Beforehand, when no such quota was in place, the funds for the camp activities came very irregularly, and most of the funds were used at District level. The recent decision to add twenty more camps to the project can be done because project operation at District level has become more cost-effective. These developments are evidence that LM&CF are following up on possibilities for better spending of funds on extension at the grassroots level.

The impact of LM&CF is demonstrated through improved yields among the target people who have adopted the technologies. In this light, it is the impression of the evaluation team that a larger share of the budget than the present 12 percent should be used for District and camp level activities. At present, the proportion of HQ and technical assistance costs (88 percent) is too high even though they include some investment costs like vehicles for Districts.

LM&CF is planning to introduce merit allowances. This move is endorsed by the Evaluation Team, being a further step towards improving project cost-effectiveness. Merit allowances are also in line with the a future approach of experimentation in extension provision.

TOR item: to assess the relevance of the Project Support Office and the Management Support Group

The LM&CF PSO is crucial, and is at present seen as an integral part of MAFF. The Chief Agriculture Specialist in the Land Husbandry Section heads the PSO. The role of the PSO is emphasised by the fact that the restructuring of MAFF, which was supposed to have taken place during ASIP1, has not been fully completed. The result is that MAFF still lacks capacity in many areas. For example, MAFF has not been in a position to assign a M&E person to LM&CF. Further, MAFF's Management Information System Unit in the Policy and Planning Branch has not been in a position to carry out the M&E function of the project, as had been envisaged in the LM&CF project document.

In general, the PSO has good management routines in place. The projects services in their present forms are much needed, particularly while the capacity of MAFF (FMU) is in question. As long as LM&CF is operating in four Provinces it makes sense to have the project HQ office in Lusaka.

The work of the Management Support Group has provided the various projects and the two governments with regular hands-on information concerning the performance of the projects. However, it is considered that two visits a year have been too much as it takes up a lot of time for the project personnel to prepare and attend to these missions. The Evaluation Team is of the opinion that a well-functioning Supervisory Board and Steering Committee with hand-picked, motivated members identified within Zambia and a representative from the Swedish Embassy/Sida would be a better and more cost-efficient way of serving the same objective. Such a system would rightly be rooted in Zambia. This does not rule out the option of external similar regular reviews as provided by the management Support Group which could be organised as required.

As noted in Section 4.2, establishment of Integrated Project Cycle Management routines would greatly facilitate the management and monitoring of the project.

TOR item: to assess the cooperation with other organisations/projects, e.g. Conservation Farming Unit, ZNFU, EEOA, CLUSA, SCC, RELMA, FARMESA, etc..

LM&CF is collaborating and coordinating its activities with a lot of other organisations: ZNFU, EEOA, CFU, CLUSA, GTZ, SCCI, RELMA and FARMESA. In general, collaboration has proceeded well. At the same time, we see scope for more cooperation between Sida-sponsored projects. For example, the possibility that LM&CF practices should be included as extension packages for MDSP seed growers and EEOA-facilitated farmers. Main Report, Section 2.6 elaborates further on potential cooperation between projects.

Efficiency was also demonstrated through fruitful collaboration and maintenance of links with CFU and RELMA. This has ensured that LM&CF has been up-to-date with technology development and been able to adapt them to local conditions in the field. The success of this process also reflects the broad experience and knowledge of the LM&CF TA staff.

5. Factors determining sustainability and compatibility

5.1 Compatibility with strategic goals of Swedish development aid and cooperation: Reduction of poverty, promotion of equality, democracy and human rights

LM&CF is relevant to Sida's goals for poverty reduction through its promotion of technology which is able to increase productivity of land and labour on smallholder farms.

The introduction of the Participatory Extension Approach (PEA) has involved the farmers in decision-making concerning how LM&CF fieldwork is organised, and in monitoring its activities. As practiced within LM&CF, PEA has clearly involved the farmers to a greater extent. But the extent to which it is actually *empowering* them to take up responsibilities is not yet clear. However, the introduction of PEA is a step towards genuine participation which builds ownership and provides important elements of transparency and accountability at local levels. These are all important building blocks in the movement towards a working democracy.

LM&CF's gender component is promoting values of equality and human rights.

5.2 Relationship to the policy environment

TOR item: to assess national policies within LMCF's scope of responsibilities and the Project's relevance in relation to those policies (and in the Zambian context)

Through the inclusion of LM&CF in the ASIP1 programme, LM&CF is clearly relevant to policy at the time it started. However, it now looks as if there may be some shifts in policy (Main Report, Sections 2.2 and 2.8).

5.3 Economic and financial feasibility

The impact studies carried out by LM&CF have demonstrated efficiency, in that the investments in the project are likely to produce a positive financial result. If adopted on a wide scale, the technologies seem to have potential considerably to increase the productivity of, and economic returns to the agriculture sector.

5.4 Validity of institutional relationships and capacity

TOR item: to assess the intervention methodology in terms of institutional sustainability including extension, financing, marketing, reporting and monitoring

5.4.1 MAFF and the Extension Service

The institutional sustainability of LM&CF in relation to MAFF is commented on elsewhere in this Evaluation (Sections 4.4 and 4.5).

The Participatory Extension Approach (PEA) is currently in the process of replacing the training and visit approach (T&V) which has been the standard extension approach of MAFF since the 1980s. The two approaches are fundamentally different in their philosophy. T&V is top down, with the motto to “educate farmers” by giving directives on the right way to adopt technologies. In the implementation of T&V approaches, farmers are often given directives without explaining them why a practice is believed to improve the yield.

PEA is bottom-up, demand-driven and collaborative. It emphasises dialogue between the extension agent and the farmer. Farmers’ knowledge and experience is recognised and valued, and the new technologies are offered through exchange of knowledge. The farmer is offered a basket of choices. The extension worker’s role is to facilitate, guide and assist the farmer in solving his/her problems.

MAFF and LM&CF have both recently adopted the PEA approach to extension work. As the new approach has only recently been introduced, the participatory work performed is still very weak. It is naturally influenced by the attitudes learned from many years of implementing the T&V system.

The successful implementation of PEA will require much more emphasis in form of training. It should be recognised that both attitude and behaviour change slowly. However, as the MAFF extension service is presently being challenged by NGOs and the private sector, this moment might be a fruitful time for the introduction of new ideas which could trigger change.

5.4.2 FMU (MAFF)

FMU’s performance was poor in 1998, and this led to the decision that the consulting company should take over the responsibility of transferring funds to the Districts (Section 4.5). Since then, FMU (MAFF) report that its operational capacity has improved considerably. However, at this stage it is not recommended that Sida goes back to funding through FMU (MAFF). Sida should continue to monitor the performance of FMU (MAFF) through the Policy Support project (PPB), and through other donors who are still using FMU (MAFF) for channelling of funds.

5.4.3 District Councils

The role of the District Councils might considerably change during the coming years (Main Report, Section 3.6). At this stage it is important for all projects in Zambia closely to follow this development and what projects’ roles would be in the future regarding the District Councils.

5.4.4 Other Linkages

On several occasions, LM&CF staffs have raised the issue of marketing problems for the farmers. It is recommended that any future project in the fields covered by LM&CF should involve a more holistic approach to smallholder farmer development, in particular through further improved links and collaboration with other organisations, e.g. CLUSA, ZNFU and, the possible successor project to the present EEOA project, for business approaches and marketing information.

5.5 Socio-cultural aspects

In the sense that LM&CF technologies appear to be appropriate to local conditions and the need of smallholder farmers in Zambia, one may conclude that the project is appropriate from a socio-cultural point of view. No specific problems of socio-cultural origin were mentioned by farmers or project staff during the Evaluation.

The PEA methodology (Section 5.4.1) centres on dialogue with farmers. As this method develops in Zambia, practitioners (including extension staff) should be expected to dwell on socio-cultural aspects with each and every target group, and to incorporate into projects actions which are needed to take socio-cultural factors into account.

5.6 Responsiveness to the problems of hiv/aids

At present, the implications of HIV/AIDS are not being systematically addressed by LM&CF. Up to now we consider that this has amounted to a missed opportunity. However, in 2001 activities to include HIV/AIDS have been initiated, including the undertaking of a study on the subject. Without doubt, some of the techniques promoted by LM&CF have greater or lesser applicability to households who have sick family members. Over the remainder of its duration, LM&CF could productively categorise its interventions into those, which are more or less suitable for labour-short households, and could advise extension agents accordingly. The Evaluation Team recommends, in addition, that each project should distribute awareness materials about HIV/AIDS among their staff.

5.7 Participation, ownership and responsibility among beneficiaries

Participation (PEA) is discussed above (Sections 5.1 and 5.4.1). The Evaluation Team suggests that, in any next phase, the planning with farmers would take a more holistic approach. Presently, PEA is involving farmers in decision making. There is now scope for modifying the project planning and implementation model so that these processes not only involve the farmers but actually empowers them, challenging them to accept more responsibilities. A move along these lines would further build up ownership of, and commitment to a project. The plan to start with participatory beneficiary monitoring in 2001 is a useful step in this direction.

Stakeholder ownership would be significantly improved by ensuring that the planning for any further projects is done in a fully participatory manner.

5.8 Responsiveness to gender-quality

LM&CF has appropriately included gender aspects into its activities. Substantial preparatory work and training has been done to mainstream gender in project activities. LM&CF still needs to do more follow-up work in the field, particularly in assisting extension staff to use what they have learned.

5.9 Environmental sustainability

LM&CF has had a positive effect in sustaining the environment. The technology which LM&CF introduces supports sustainable land use on the farms. It also has a positive impact on the environment, for example by reducing the burning of crop residues, through improved recycling of soil nutrients, reduction in erosion and in the breaking of farmers' dependence on inorganic fertiliser.

5.10 Appropriateness of technologies

Technologies promoted by LM&CF have proved to be very appropriate. The long term Sida investment in research and extension in Africa is bearing fruit. Of the technologies used, the physical and biological structures have been the ones which have been most widely adopted to date. Various studies carried out by the project have proved increased soil fertility in the fields of adopters. Yield increases of up to 2 to 3 times have been noted.

6. Conclusions and suggesttions

- Participatory planning required of the next phase
- Log frame and IPCM approach to be adopted, starting from the planning of the next phase
- Relationship with MAFF sorted out, I suggest to continue working in a similar way but having more freedom to experiment and work with quality/performance related incentive
- Strengthen the PEA approach in the camps – or power to the farmers in deciding the budget
- A larger proportion of the budget should go to the camp/district level
- Better integration with other projects
- Strengthen M&E – linking M&E with log frame
- Adjusting the programme towards the present liberalised market – look for opportunities (e.g. CLUSA
- The evaluation team suggests that limited internal audits of the field operation would likely improve efficiency of the project and transparency of the operation
- PSO should continue to manage the funds until such a time when FMU has demonstrated capability to do the job.

Annex 4

Evaluation of the Project: Multiplication and Distribution of Improved Seed and Planting Material

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1. Executive summary

The following comments are considered relevant to the operation of MDSP over the remainder of its present term. They would also be relevant to a future project along MDSP lines (Main Report, Section 5.5.4).

1. We recommend the continuation of the MDSP project because of the pivotal role it is playing in contributing to rural household food security and increased incomes. We note that the network established by the project needs strengthening for it to become fully functional and sustainable.
2. We suggest that MDSP becomes more participatory and responsive to the needs of the beneficiaries. Yearly work plans should be based on needs assessments to account for the seed produced in the previous year and to take into account emerging issues. Where possible, the project should consider increasing the number of mandate crops, if so demanded by farmers.
3. We consider more outlying areas could benefit from the use of improved varieties. To this end, the project should experiment with the concept of phasing-out from existing target areas where farmers become competent in seed production and there is evidence of seed saturation.
4. The MDSP logframe needs to be redrafted, and the task of monitoring project Indicators needs to be consolidated substantially. As part of this, MDSP should conduct baseline surveys in operational Districts so that it can set benchmarks against which its achievements can be measured.
5. The mission noted that research does not have the necessary resources to respond to technical issues raised by farmers. We suggest that MDSP includes in its budget a line item which will allow the research branch to conduct applied research in response to technical issues raised by farmers. Such research must be focused and result oriented. In addition, funds should be set aside for breeders to multiply breeder seed of new varieties. Breeder seed is usually in very small and limited quantities. Without funds for the multiplication of the resulting seed, the rate at which the project (MDSP) would get access to new varieties would be extremely slow and in turn this would negatively affect the rate at which farmers in project areas get access to seed of improved varieties.
7. We note the expiry in December 1999 of the agreement between MAFF and Zamseed concerning exclusive rights to varieties developed by research. This means that varieties developed after that date belong to Soils and Crops Research Branch of MAFF. From our discussions with research management, there is willingness to avail future varieties to MDSP and similar projects as a public good. This issue should be confirmed during any further planning for the next phase.
8. While seed for targeted crops is available within communities, it was noted that accessibility by poor households was hampered by the price tag (cash) attached to it. Though the project makes deliberate efforts in encouraging non-monetary transactions such as bartering and seed for work, the mission still felt that a more proactive approach should be adopted. In our view, this would ensure that poor households gain access to seed. The mission is however, aware that if all transactions are non-monetary in nature, then this might compromise the concept of sustainability because seed producers need money to procure agricultural inputs. A balance between the two should be investigated.
9. The use of the smallest possible unit of measure should be encouraged particularly for finger millet. This may call for the revisiting of the unit of measure so that farmers intending to grow smaller areas could have access to seed. Currently, the lowest unit of measure for finger millet plants a quarter of a hectare. It is however, recognised that selling in open containers without proper seals may compromise the quality.

10. Two-way dialogue and exchange of information between the farmer, extension and research is not strong enough, and needs to be strengthened. Active involvement of researchers in field days would offer an opportunity of direct contact with farmers where practical issues could be addressed. Areas needing further research would become apparent to researchers. This interaction would avoid release of technologies which do not meet consumer and market demands. MDSP should consider further strengthening the concept of participatory variety selection whereby farmers would be exposed to a number of varieties from which they could make selections.
11. There is a danger of farmers wholly abandoning their local varieties (landraces) in preference of improved ones. This is already the case with sweet potato. MDSP should consider giving support to the purification of landraces to avoid genetic erosion. Such purified seed could be distributed through seed growers' associations. Alternatively, the project could collect the seed for local landraces and hand them over to the Genetic Resource Unit of MAFF Research Branch for conservation. This could be done at no cost to the project as such an activity could be undertaken during normal field trips.
12. The process of monitoring project impact needs to be improved (item 4 above). The form recently designed by MDSP to track seed quantities produced by individual farmers, mode of sale (cash, seed for work, barter, gifts) and the number of clients appears to be appropriate in giving a better reflection of the actual number of beneficiaries. It also gives an indication of carry-over seed.
13. MDSP should consider construction of seed storage sheds where they do not exist at community level. As well as providing storage, these will provide a central place for seed treatment (addressing possible dangers of chemical mishandling) and an important geographical focus for all project activities in the community.

2. The subject of the evaluation

2.1 Scope

Use of quality seed is one of the quickest and most efficient ways to increase crop productivity. Without good seed, the impact of other inputs on yield will not be as significant. While seed for hybrid varieties for which commercial companies have interest can be accessed with less difficulty, the same cannot be said for traditional crops.

Maize production in particular, which heavily depends on external inputs has become a nightmare for the small-scale farmer. The resulting vital coping strategy adopted by the small-scale farmer with a low resource base, has been the inclusion of traditional crops (cassava, sweet potato, sorghum and cowpeas) which adapt well under marginal conditions into the farming system.

Before the start of MDSP, seed availability studies for traditional food crops revealed that improved seed was in short supply. When available, it had been prohibitively expensive and was usually late. This led to small-scale farmers resorting to using recycled seed. This has subsequently resulted in low yields. To address this problem a number of seed projects have been initiated by several NGOs, donors and government institutions, notably PAM, LLFSP, CARE international, GTZ, World Vision International, and IFAD. Though progress has been made in achieving the objective of community seed production at affordable costs in some of the target areas, the problems still persist over much of Zambia. This is mainly attributed to the unsustainable manner in which seed projects have been implemented. By and large, activities at community level have ceased once a

project comes to an end. It is against this background that in 1996, MDSP was initiated by agreement between MAFF and Sida. The project was conceived out of the concern that despite significant progress made in developing new and improved seed varieties of traditional crops with Sida support to MAFF Food Crops and Seeds Research, there existed no effective means of channelling those seeds to small-scale farmers in rural areas. MDSP operates in fourteen Districts within four Provinces (Main Report, Table 5.1). It focuses on developing a system for production and distribution of improved varieties of traditional crops (cassava, sweet potato, beans, groundnuts, finger and pearl millets and cowpeas) in rural areas. Emphasis is on sustainability as the basis for seed production. The project operates on the premise that the use of quality seed will increase yields, thus contributing to increased food security and household incomes for rural populations. Specifically, MDSP is guided by the following objectives:

- (a) promoting the use of improved varieties of traditional staple food crops,
- (b) expanding the area under improved varieties, thereby promoting crop diversification,
- (c) supporting the development of small-scale entrepreneurs in seed production and business operation, with the vision of creating a commercial network for providing varieties of improved seed for food crops in rural areas, and
- (d) strengthening the capacity of seed support services to ensure sustainable quality control and effective regulation of the informal seed sector.

2.2 Institutional set-up

Zamseed manages and coordinates all project (MDSP) activities on behalf of MAFF and Sida, and collaborates with SCCI whose mandate is to ensure quality control and the coordination of the whole seed sector in Zambia. The roles played by PAM are in the area of promotions (field days, seed fairs, demonstrations and radio promotions). MDSP is fully integrated in MAFF and uses the MAFF extension network.

3. Evaluation issues

3.1 Relevance

Lack of improved quality seed has been frequently quoted as a major constraint to increased crop production. With increased cost of agricultural inputs resulting from the removal of agricultural subsidies, maize production in Zambia has become a preserve of the few. Input distribution to rural areas is hampered by poor road infrastructure. Seed companies who require a minimum tonnage before engaging in seed business are reluctant to get involved in seed distribution to rural areas. Particularly, they do not find it profitable to engage in seed for traditional crops. In addition, the bulkiness of some crops (cassava and sweet potato) in relation to their value, makes such crops unprofitable to transport from one place to another. This has led to non-availability of the required quantities of seed in most rural areas. When it is available, seed is frequently late and expensive (partly due to transportation costs). As a coping strategy, small-scale farmers have resorted to planting traditional open-pollinated crops. Unfortunately, most of the small-scale farmers retain their seed and recycle it over a number of years. This continuous recycling of seed leads to disease accumulation, lowers the yields and ultimately results in continued food insecurity.

Further, experience has shown that formal seed companies find traditional crops for the small-scale farmers unattractive because of the low buying capacity of those farmers. The severe lack of cash among small-scale farmers, and lack of assurance for repeated sales, have made formal seed companies shun this group of the farming community.

Currently, the formal and the informal seed sectors are guided by different objectives. While the major objective of the formal seed sector is to make profits through the sale of hybrid seeds for which recycling is not possible, the informal seed sector is more concerned with food security through access to improved seed. In the formal seed sector the seed regulations are extremely strict. On the other hand, in the informal seed sector, Quality Declared Seed is acceptable as long as it meets minimum standards.

In our view, the way forward for the informal seed sector is to establish a sustainable link between the seed growers associations and sources of basic seed, and to develop further a system which will ensure that varieties are moving in this sector in a regular fashion to avoid deterioration. (For details refer to ref. 513).

We find that MDSP's activities are relevant. They are contributing to improved household food security in rural areas through production within the communities of improved seed varieties at affordable prices. According to farmers interviewed during the mission, their use of improved seed has increased agricultural productivity per unit area through shorter cropping periods, higher yields per unit area and higher tolerance to major pests and diseases. Further, the availability of seed for various food crops other than maize has led to increased crop diversification and has reduced their dependency on maize. Thus MDSP is performing a vital role in taking research technologies (improved seed and planting materials) to farmers. Farmers who previously had difficulties in accessing seed and planting material are now producing and improving these within their communities. Given that the formal seed sector is reluctant to get involved in seed multiplication of traditional self-pollinated food crops, it is reasonable to suggest that MDSP is better placed to fill this gap. MDSP therefore continues to be relevant.

Environment: MDSP has taken the care to conduct its activities in an environmentally friendly manner. For instance the project insists that finger millet should be grown on permanent fields contrary to the general practice of slash and burn.

Economic Development: Crops which previously had no economic significance are now entering the market. For example, a recent study conducted in northern Zambia ranked groundnuts and beans as the most important cash crops. The two were followed by sweet potato and cassava. In Southern Province, there has been an increase in the volumes of trade in sweet potato, with some exports to Zimbabwe. This clearly demonstrates that traditional crops are entering both local and international markets, and are contributing to increased household incomes in rural areas.

Gender: A gender policy implemented by MDSP requires that at least 40 percent of beneficiaries are women. The formation of women's seed grower groups bears witness to this. Women are getting involved in seed production, and are contributing to household incomes through the sale of surplus seed. This signifies that the economic empowerment of women is going on under MDSP. In view of the above, the Evaluation Team considers MDSP to be relevant to the needs of the rural communities who are food insecure, and to be a project which is contributing significantly to improved household food security. In our view, seed growers who have been assisted have now understood the project concept of seed entrepreneurship.

Initially, MDSP adopted a "top down" approach. It defined in advance the crops to be multiplied and selected varieties to be distributed. This approach was not based on factual assessment of the prevailing situation. It should be noted that MDSP has since taken steps to adopt a more participatory approach in which farmers needs and demands are taken fully into account.

3.2 Impact

TOR item: to assess the performance in the establishment of primary and secondary multiplication sites

The Evaluation Team observed that MDSP has made very good progress in the establishment of primary sites (Mansa Technology Assessment Site, Misamfu and Mutanda Research Stations) as sources of newly developed varieties. It has also funded the multiplication of new dry-season bean varieties. To ensure high standards, breeders closely supervise the fields. Seed from these sites have been used to establish secondary sites at District level. In addition, bulking sites have been established at community level. Overall, MDSP has successfully created a network through which seed and planting materials are reaching farmers.

TOR item: to analyse the progress made in seed quality control activities undertaken by SCCI

MDSP has funded the establishment of one seed-testing satellite laboratory at Mufulira Technology Assessment Site instead of the three originally planned. This discrepancy was as a result of underestimation of the cost by the project. Laboratories at Misamfu (Kasama) and Msekera (Chipata) Research Centres were established with funding from the United Nations Development Program through SCCI. SCCI has seconded its personnel to all these stations. The Evaluation Team learned that a total of 89 seed samples were tested at Misamfu satellite laboratory in 1999/2000 season, out of which only three failed the test. Other samples were tested in Lusaka. It was also learned that the laboratory at Mufulira Technology Assessment Site is now functioning. The Team considers that the existence of these decentralised seed testing laboratories will significantly reduce the waiting period, in contrast to the time taken to receive results when seed testing is done in Lusaka. It is recommended that, funds permitting, the remaining laboratories be set-up by the project.

MDSP has been instrumental in the setting up of standards for root and tuber crop that did not exist beforehand. In addition, the project has funded the training of District Crop Husbandry Officers in seed production, seed sampling, seed inspection, processing and storage. These officers are now recognised as Licensed Seed Inspectors by SCCI.

These steps have certainly contributed to an efficient system of producing quality seed. However, one area of concern is the uncontrolled movement of vegetatively propagated material (cassava and sweet potato) which is not properly inspected and monitored. The Evaluation Team recommends that measures be put in place to ensure that planting material is inspected before inter-provincial distribution.

TOR item: to assess the development of seed entrepreneurship among the small-scale farmers of Zambia

The Evaluation Team noted that three seed associations had been formed in Northern Province. In its tour of Northern Province, the mission met with two of these (one in Mpika and the other in Chinsali). In Northern Province, there are 163 members affiliated to seed growers associations, out of which 50 are women. It was also reported that the stage of development of these associations differs widely from District to District and from Province to Province. The most active and functional groups have started screening applications for membership, monitoring their fellow farmers by holding regular meetings, and are fully participating in the organisation of field days and seed fairs. It was further reported that all associations in the four Provinces have completed the registration process and are awaiting certificates of registration from the Registrar of Societies. Five of the thirteen societies have opened bank accounts. The project has facilitated the training of District

Association Executive members in management skills. The Evaluation Team recognises that MDSP has actively and constructively facilitated the formation of these associations. Some members interviewed were very clear that the associations were the right fora for expression of their agricultural concerns. They also claim that their knowledge of fellow-farmers allows for proper screening of seed growers. In addition, they feel that, through field demonstrations, they could give a fair assessment of appropriate technologies. They also feel that they are better placed among their fellow-farmers in respect of loan recovery. However, it was noted, both in Northern and in Southern Provinces, that these institutions are still in their infancy, are fragile and need further support before they could become fully functional and sustainable institutions. In particular, further training is required in entrepreneurial and management skills. A problem of seed associations accessing seed of improved varieties from breeders is anticipated. A practical and workable solution would be to establish a central place which could source breeder seed from researchers and multiply it to foundational seed level. Seed associations would then be linked to such an organisation. In our view, Zamseed is better placed for this type of work because of its long-term experience in the production high quality foundation seed.

TOR item: to highlight any multiplier effects of the Project to household food and national food security, e.g. adoption of improved seed varieties, and the establishment of an effective seed multiplication and distribution network in the informal sector

According to the available data (project reports), MDSP has reached 841 direct beneficiaries, i.e. seed growers who have been involved in seed production. The multiplier effect is understood to refer to people who are using improved seed, over and above these seed growers. The project reports that these people total 32,976, among which 40 percent are women. They have benefited through seed procurements from seed growers. MDSP further acknowledges that the estimate (32,976) is based on quantities of seed marketed.

There is clear evidence in the field and from reports commissioned by the MDSP that improved seed and planting material has reached many farmers. In fact many of the farmers interviewed testify to the advantages of using improved seed - higher yields, shorter growing periods and tolerance to major pests and diseases. Through interviews, the Evaluation Team learned that cassava planting material from some parts of Northern Province had been procured for distribution to refugees (from Congo) based in Mporokoso. This is indeed a significant contribution to the feeding of the refugees whose traditional crop in Congo is cassava. In Western Province, farmers are now able to plant early-maturing cassava varieties which were not in the area before the start of the project. In Gwembe District, cowpea production is reported to have increased, contributing significantly to the alleviation of hunger in the area. The Evaluation Team feels that MDSP could have benefited more from accurate data collection. This would have given a clearer picture on the quantities of seed produced, packaged, disposed of through cash transactions, seed for work, gifts, barter, and the amounts of leftover seed. MDSP has taken some measures to capture this information, even though the slow rate at which the data forms are sent back for analysis is of concern. In the absence of reliable data, there have to be doubts whether MDSP has actually been reaching the claimed number of beneficiaries. These doubts also stem from the fact that, in some areas visited, farmers had leftover seed (particularly sorghum and finger millet) which, according to the estimates provided by the project, had been planted. In light of the above, the Evaluation Team has to conclude that no reliable data to support actual adoption was available. The Evaluation Team examined crop production records at District and, in some cases, Provincial and National levels. From these records, it is apparent there is a clear increase in the production of target crops and that the demand for seed and planting material is increasing. Two reasons were cited for this trend:

(a) agricultural inputs for hybrid maize have become prohibitively expensive for most of the small-scale farmers who have turned instead to traditional crops which require much less external inputs, and (b) the realisation that improved seed gives better yields in a much shorter cropping period. In the above situations, crop production has increased. However, it is difficult to apportion an increase which is solely due to MDSP because there are other projects operating in the same Provinces which are also promoting seed multiplication. The Evaluation Team also investigated the flow of improved seed from research down to the farmer. It was clear that MDSP has established linkages with research as a source of new seed. The project has also developed linkages with farmers at community level who have been trained in seed production techniques and are taking up seed production as a business. The formation of Area Seed Growers' Associations, while they are still in their infancy, has further consolidated the network at community level. A network now exists which can be used as an entry point for new seed and any other technology intended for small-scale farmers.

TOR item: to assess the contribution made by the Project to household and national food security through the promotion of improved seeds and planting materials among small-scale farmers.

Farmers' evidence and testimonies suggest that the availability of seed and planting material has contributed significantly to their household food security (for more details, please refer above). However, we consider that this trend should have been investigated more closely by MDSP, and supported by data showing a bridging of the hungry period and the number of meals consumed per day during the "hungry" period. Until such data is collected, it is difficult to be sure that the trend exists, either locally or generally.

3.3 Effectiveness

TOR item: to assess the achievements of MDSP in relation to its stated objectives According to its project document (Reference 520), MDSP is guided by the following objectives:

(a) *To establish an effective seed multiplication network:* The process of creating a seed multiplication network has started and significant progress has been made. MDSP has recognised other players in the informal seed sector. Research is recognised as a source of high quality seed, and the communities are the places for the establishment of bulking sites. Seed growers are the last links with the communities, and they produce seed within the communities. In our view, the project has made good progress in this area, and it can be stated with confidence that a network for seed multiplication now exists. The Evaluation Team, however, noted that the research – extension – farmer dialogue is still weak and needs consolidation. While research material can now reach farmers in a more efficient manner, channels for feedback from farmers need further consolidation. A system to address farmer problems by way of applied/adaptive research should be explored.

(b) *To establish an effective and sustainable improved seed distribution network:* A measure of sustainability in the new seed distribution network is detectable in the formation of seed growers' associations and their assumptions of various tasks. When they are *fully* functional, these associations will advertise for the sale of excess seed, will seek foundation seed for new varieties, and will work to link small-scale farmers to markets. Currently, the network to identify areas of excess and areas of deficit is not yet effective. This means some seed growers have leftover seed, while in other areas the seed is in high demand, apparently unsatisfied as yet. Clearly the long-term sustainability of the distribution system depends on the effectiveness of the seed growers' associations. At present, these institutions are weak, and still require further training in financial and managerial skills for them to function well.

(c) *To promote the use of improved cultivars of traditional staple foods:* In addition to the promotion done by MDSP though limited to target Districts, Camps and selected farmers, demonstration plots have been established by MDSP outside operational camps. In our view, this has contributed to a higher multiplier effect of the project. The mission learned that difficulties have been encountered in promoting crops such as cassava in the Southern Province owing to processing problems. Destruction of the crop by animals in the south is another problem. Promotion of varieties that have traits which are not readily acceptable by farmers (storability for sorghum, colour for finger millet, bitterness for cassava, high oil content for MGV4 groundnut) have limited their adoption despite the vigorous promotions. The project has given feed back to research regarding the problems raised for sorghum and finger millet.

Direct promotion is bearing fruit in some areas especially in the Gwembe Valley, an area which experiences chronic food insecurity. The promotion of cowpeas and its positive attributes has significantly contributed to improved household food security in that area.

Despite the abovementioned problems of adoption, the use of improved traditional crops has significantly increased in target areas. It is recommended that issues of processing should be addressed in collaboration with SHAPES which has a component for food processing and storage.

(d) *To promote crop diversification:* MDSP has contributed positively to crop diversification through seed production of crops other than maize, and the benefits of crop diversification were evident during the Evaluation Team's visit. These included reduction in maize mono cropping, and farmers reporting a broader source of carbohydrates from cereals and root crops, together with proteins from legumes. MDSP, in collaboration with MAFF and PAM, has produced field extension bulletins. In our view, this has been a significant step forward in the promotion of traditional crops. Until now, technical information for traditional crops has not been available in local languages. Radio promotions done by MDSP and PAM have also assisted in disseminating information regarding traditional crops. Other types of promotional activities include demonstrations by way of conducting field days, seed fairs and establishing demonstration plots.

The Evaluation Team noted that MDSP appears not to have succeeded wholly in sensitising farmers that the use of quality seed is important for increased crop production. This is particularly true for finger millet where farmers are still recycling the seed. They prefer to use ordinary seed from the market, which is much cheaper. The project should embark on vigorous campaign to sensitise farmers on the benefits of using quality seed.

TOR item: to evaluate the effectiveness of the MDSP in utilising the extension framework of MAFF while providing logistical support

MDSP is fully linked into the existing MAFF extension system at Province and District levels. This has been effectively done, allowing reductions in direct operational costs to the project. This is a healthy and positive contribution to capacity building within MAFF.

At field level, things have not run so well. Extension staff is over-burdened with many other activities which demand their attention. While they try their best to meet all obligations, it is apparent that they are over-stretched, and this leads to divided loyalties, a situation sometimes expresses itself in the late submission of reports. Further, several of extension staff outside MDSP operational areas are immobile due to lack of spare parts for their bicycles or lack of fuel for their day-to-day operations. MDSP has provided logistical support in its operational areas to enable extension staff to function more efficiently.

TOR item: to evaluate management and implementation of the Project, the institutional and project sustainability.

The initial planning process took the top-down approach in which it was assumed that all seed developed by research needed to get to farmers. This assumption was guided by the thought that farmers would accept all the technologies transferred to them. Because of this, most of the targets in the project document were precisely defined from inception of the project. Project management, however, realised along the way that there was a clear need to take into account the concerns, needs and wishes of the farmer, and this led to a change in approach. Now, the planning is spear-headed by the farmers through Seed Growers' Associations with the participation of the Camp Extension Officer, who then reports to the District Office. The Provincial Project Coordinator consolidates the work plans from the Districts and reports to the MDSP Project Manager/Coordinator. The Provincial work plans are thereafter discussed and sent to MDSP (Lusaka). MDSP (Lusaka) further consolidates the work plans, with the participation of PAM and SCCI, before they are sent to MAFF and Sida for approval. In our view, this process takes into account the concerns of the beneficiaries and reflects on past experience. The process also allows for essential feedback particularly on key matters such as leftover seed and the reactions of farmers to released varieties.

Currently, MDSP monitoring and documentation are limited in scope, probably due to limited human resources in the project. However, MDSP's record of implementing its set targets, and general coordination appear satisfactory at all levels. The Evaluation Team recommends that monitoring and documentation be improved, and that annual reporting, late on occasions in the past, should be timely in the future.

The project has taken measures to ensure sustainability beyond the project life. By operating through the existing extension system, the experience gained in seed production will remain in MAFF extension system. This is a positive contribution to institutional capacity building. The formation and training of seed growers' associations is the surest way of sustaining informal seed production systems in rural areas. When fully functional, the associations are expected to seek and promote the interests of their members. This will be through linkages in areas of seed demand, and will provide feedback to research concerning consumer and market demands for improved varieties.

3.4 Efficiency

TOR item: to assess the overall Project management in terms of narrative and financial reporting, project implementation and monitoring of activities

MDSP does not seem to have a clearly defined system of measuring Project impact. This appears to stem, in part, from an initial lack of base-line data which could have been used as a benchmark against which project progress could have been measured. In further part, it stems from confusions in the MDSP log-frame (Reference 109, Table 2) in which, *inter alia*:

- the stated Overall Objective includes both an Overall Objective and what seems to be the MDSP Immediate Objective
- the stated Immediate Objectives and Outputs all appear to be essentially related to Outputs, but the terms used are unclear, and there are overlaps between some of the narratives.
- some of the Indicators are valid (i.e. they reflect what the beneficiaries should be done afterwards which they were not doing beforehand), but others are not (e.g. “number of trained farmers” is not a valid indicator of “trained farmers”).

- none of the Indicators have attached numerical values (numbers and percentages). The impression gained is that, in practice, MDSP has been more concerned with meeting set targets at Activity level. The project has established a system of timetabled visits to project areas to ensure that critical operations are undertaken during seed production. This is done through field inspections and the Evaluation Team was informed that the number of fields written off due to poor management practices has declined as more and more farmers become experienced in seed production.

While this approach is useful in itself, it has been done at the expense of monitoring the actual impact realised from the seed produced (i.e. monitoring the Immediate Objective and Outputs). MDSP appears to have noticed this omission, and has started to redress the situation using a system of tracking beneficiary impacts by keeping updated records through seed growers' associations. This is certainly an appropriate method of monitoring in the sense that it involves the beneficiaries themselves in the monitoring process, something which they will have to do for themselves after the end of the project. In addition, this system will allow MDSP to document the lessons learned in a substantiated and analytical form.

These developments notwithstanding, the impression gained is that the logical framework was prepared and approved in a somewhat inconsistent form, and that, once that task had been completed, the framework and its Indicators were substantially forgotten. If a project like MDSP is to continue in the future, we consider Sida should act to ensure this does not happen again.

The financial statements as presented in the reports are detailed enough to track the costs under each line item. We have noted throughout the reports that GRZ contribution has never been honoured. We recommend that this issue be pursued with relevant authorities.

TOR item: to assess the cost-benefit of the Project

MDSP have reported budget utilisation over the period 1998 to 2000 as follows:

Cost Item	Swedish Contribution (SEK)	Percentage of total amount spent
Direct multiplication and distribution	958,069	10.2
Seed processing and marketing	185,335	2.0
Management, administration and extension support	4,513,248	47.9
Training and workshops	1,130,023	12.0
Seed training – SCCI	239,350	2.5
Quality control – SCCI	440,833	4.7
Coordination – SCCI	589,003	6.2
Capital expenditure	1,365,387	14.5
Total budget funds used	9,421,248	100.0

The total Sida budget (Reference 520) is *SEK 11,329,000*. The total GRZ budget commitment is *K939,307,000*. The expenditures above are from the Sida contribution alone, as the GRZ contribution has not been fulfilled.

In the table above, management, administration and extension support includes 15 percent total variable costs attributable to management fees paid to Zamseed. Other costs include fuel and

lubricants for transport for Provincial Coordinators' and MAFF extension staff involved in the project implementation. This item also includes subsistence allowances for Provincial Coordinators and extension staff, together with motor vehicle repairs (three vehicles were involved in road traffic accidents and were repaired) and maintenance costs. Earlier missions have expressed concern over the high costs in relation to the beneficiaries (Reference 151). We were informed that MDSP project management has taken measures to meet project objectives at least cost. These have included (a) more efficient use of existing institutions without creating parallel ones (e.g. MAFF extension), (b) establishment of more District nurseries to reduce long distance movements of cassava and sweet potato planting material, and (c) farmer group mobilisation. Though these measures may take a while to bear fruit, the management appears to be taking positive steps to reduce running costs. It may also be noted that farmer training for capacity building, by its nature, is initially an expensive undertaking, but once completed the results are long-lasting.

TOR item: to assess the levels of cooperation among the implementing organisations, these being PAM, SCCI, MAFF Department of Field Services and Zamseed.

In our view, MDSP has cooperated well with PAM in the area of planting material production and seed distribution. Sweet potato nurseries for instance were established in Lusaka District in collaboration with PAM. MDSP shared the costs of formulating standards to regulate seed business in the informal seed sector and formulated the Quality Declared Seed Statutory Instrument (i.e. regulation) which is now awaiting the approval of the Ministry of Legal Affairs. MDSP has on many occasions taken advantage of long experience accumulated by PAM in the area of seed distribution during its drought rehabilitation programme. MDSP and PAM have worked together in farmer training; production of extension bulletins has been done in collaboration with PAM.

Concerning cooperation with PAM, the Evaluation Team examined the MDSP and SHAPES documents to identify areas of overlap. It became very clear that the Crop Diversification component of SHAPES and MDSP are similar in many respects, including the approach and the crops involved. We recommend that the planning process for the future support takes a close analysis of the two projects and harmonise areas of overlap (Main Report, Section 5.5.3). SCCI is the manager of the Seeds and Standards Sub-programme of ASIP1, and thus has the mandate to coordinate all seed activities in Zambia. MDSP has cooperated well with SCCI. Satellite seed-testing laboratories have been established in Chipata, Kasama and Mufulira. SCCI staff has been involved in training MAFF District Crop Husbandry Officers in seed sampling and testing, who are now Licensed Seed Inspectors. Other areas of cooperation have been in the establishment of minimum standards for Quality Declared Seed. MDSP has also been instrumental in pushing for minimum standards for root and tuber crops which previously did not exist.

MDSP is implemented through MAFF extension system. MDSP therefore makes use of the existing MAFF extension structure to implement the project. The Soils and Crops Research Branch which supplies the breeders seed for further multiplication is under MAFF. MDSP establishes primary sites at research stations, and these sites are technically managed by MAFF-Research staff. Overall, cooperation with MAFF at Provincial and District levels has been well, but there are some problems at field level involving over-commitment of extension agents (Section 3.2). The project document emphasises coordination among implementers, (PAM, SCCI and the Project Manager, (Zamseed)). However, it was noted in discussions that management coordination needs to be further strengthened, particularly when it comes to decision-making. In discussions, it became apparent that currently Zamseed, as the project manager, has the responsibility to decide on project issues and considers itself as having the power to decide which stakeholders should be involved in specific

activities of the project. This has led to other collaborating partners feeling left out. For instance the mission was informed that some management roles have not been clear, a situation which has led to some key players not having a clear picture with regard to their contribution to some major decisions. Further, the mission learned from collaborating partners that the position of the Project Coordinator was more or less like a rubber stamp, and did not have adequate authority to make day-to-day decisions without reference to the project manager. These comments gave the mission an impression that roles among collaborating partners have not been clearly explained. In our view, there is a clear need, both in any future project and over the remaining period of the present project, to define clearly the roles for each participating organisation, and to broaden the Terms of Reference for the Project Coordinator position to give more powers.

4. Factors determining sustainability and compatibility

4.1 Compatibility with strategic goals of Swedish development aid and cooperation: Reduction of poverty, promotion of equality, democracy and human rights

TOR item: to assess the achievements of MDSP in relation to the objectives of Sida's support to agricultural development in Zambia

The relevant Sida objective is promotion of sustainable agriculture through plant breeding, efforts to increase the production of high-yielding seed and soil management (Main Report, Section 2.1, item (a)). In addressing this objective, MDSP has brought to fruition the use of improved seed from research to small-scale farmers through multiplication and distribution of seed and planting material. With regard to soil management, MDSP insists on sustainable use of land through recommended cultural practices. This has been done generally well within the bounds of MDSP. However, more could have been achieved through further cooperation with LM&CF in the areas where the two projects geographically overlap.

Food security could be achieved either through production or procurement. Poverty stricken households are frequently food insecure because they cannot gain access to cash to procure the necessary food in adequate quantities to sustain normal life. Therefore, the most appropriate alternative for most rural households is food security through increased production. As noted earlier, one of the major constraints to increased crop production is lack of quality seed. To the extent that MDSP is involved in seed production which translates into increased crop production at community level in itself directly addresses the issue of poverty. From the interviews, farmers informed the mission that they are now able to produce beyond what they can consume and are selling excess seed and food crops for cash. They further reported that extra cash is used for sending children to school, seeking medical attention and meeting household necessities. In our view, this is a direct contribution to poverty reduction.

4.2 Relationship to the policy environment

TOR item: to assess national policies within MDSP's scope of responsibilities and the Project's relevance in relation to those policies (and in the Zambian context)

This assessment is made in relation to the new draft agriculture sector policy (Reference 251), whose content is described and discussed in the Main Report, Sections 2.2 and 2.8.

The draft agriculture policy mentions (a) crop diversification, (b) seed quality control and (c) strengthening of extension services as priority areas. It also mentions lack of quality seed and inadequate extension skills as major constraints to increased agricultural productivity. As a way of addressing seed shortage, seed multiplication at village level is proposed.

Regarding (a) and (b) above, MDSP is addressing the (draft) national policy by establishing seed multiplication sites within communities through area seed growers' associations. Quality seed for a wide range of crops is produced, and this contributes directly to food security through seed availability. Item (c) strengthening extension through improvement of skills is being addressed through training of extension staff in seed production techniques, and through the provision of logistical support. In summary, MDSP is, in our view, very relevant to (draft) policy in its activities, as it contributes directly to the implementation of the national policies for increasing agricultural productivity.

4.3 Economic and financial feasibility

Concerning economic and social development, MDSP has, through its facilitation of the formation of seed growers' associations, contributed to the creation of local institutions. The sale of excess seed, has enabled farmers to improve their livelihoods through increased incomes.

Significantly, previous long-term Sida support to Food Crops Seed and Research in plant breeding is now finally bearing fruit, through the creation under MDSP of working links between research and the farmer.

Overall, the Evaluation Team considers that MDSP is achieving its objectives in relation to Sida's agricultural support to Zambia.

4.4 Participation, ownership and responsibility among beneficiaries

Participation by beneficiaries and ownership is seen through the seed growers associations. For more details, please refer to Section 3.2 Impact under ***TOR item: to assess the development of seed entrepreneurship among the small-scale farmers of Zambia***

4.5 Socio-cultural aspects

The traditional crops for which seed and planting materials are being multiplied are not new to the target areas. However, tastes and preferences at times have negatively affected their adoption. Some consumers have had difficulties in adapting to new tastes (finger millet, for example).

Finger millet is traditionally grown under slash and burn conditions. However, MDSP has insisted that the crop should be grown on permanent land. The demand to employ crop rotation as a sustainable way of using land is viewed as a new concept by some farmers.

Cassava is not a traditional crop in the southern part of Zambia, though it is being promoted there because of persistent droughts in the region. While some households accept cassava as a food crop, others feel that the fencing required to prevent animal damage is too demanding. In addition, cassava requires proper processing to remove toxic cyanogens. This is considered an extra task and has to some extent affected the rate of adoption.

Traditionally, small-scale farmers exchange seed through barter, seed for work, gifts, etc., and do not often use money as a medium of exchange. The fact that monetary transactions are involved in the seed business is viewed as a strange thing in some communities.

4.6 Responsiveness to the problems of hiv/aids

MDSP does not directly pursue the issue of HIV/AIDS. However, it does include in its trainings a talk to highlight the dangers and the consequences of the scourge. It does so by using MAFF personnel trained in HIV/AIDS related issues. Considering that the scourge has negative effects on food production (area cropped reduced due to the time spent on tendering sick relatives) and depletes family savings (due to funeral costs) and social burden (looking after orphans leading to extended family burn-out), in our view, MDSP could have taken a more proactive role in dealing with HIV/AIDS issues in its operational areas.

4.7 Validity and institutional relationships and capacity

Please refer to Section 3.4 (Efficiency) and the TOR items therein.

4.8 Responsiveness to gender-equality

In the initial stages of project formulation, MDSP was not very sensitive to gender. However, along the way, it formulated an internal policy stating that at least 40 percent of project beneficiaries should be women. According to project records, out of the 841 seed growers, 35 percent were noted to be women, and out of the 32,976 beneficiaries, 40 percent are said to be women. Thus, MDSP has taken deliberate measures to encourage women seed growers who, according to the survey conducted, may well be better seed producers than men. Women's interest groups have also been formed. Women's representation in area seed growers' associations in some cases is more than 70 percent. At the same time, there are doubts about MDSP's information base concerning the percentage of women among the 32,976 beneficiaries (Section 3.2).

4.9 Environmental sustainability

Increased production of finger millet leads to opening more land through cutting down of trees. Even though MDSP does not contribute to cutting of trees through seed production, it is impossible in practice to ensure that all secondary beneficiaries adhere to sustainable land utilisation. Continuous cassava production on the same piece of land depletes soils. While it is clear that MDSP insists on recommended cultural practices for seed growers, again the same cannot be claimed for the secondary beneficiaries who buy seed from seed growers. It is therefore recommended that, over the remainder of its duration, MDSP takes a more proactive role in sensitising farmers in the target areas of the dangers of using the land in an unsustainable manner. This is an area for possible collaboration with LM&CF.

The Evaluation Mission noted with concern the possibility of improved varieties replacing local landraces. This is already happening for sweet potato. If it continues, this trend may eventually lead to loss of valuable genetic resources through erosion. The need to conserve agricultural biodiversity in Zambia is a matter of great concern, because of its importance in the livelihood and activities of the general population. However, it is recognised that MDSP as a project does not have the mandate for germplasm conservation. The mission is of the view that during its normal field trips, the project could collect local varieties which face possible extinction and hand them over to the Genetic Resource Centre under MAFF Research for conservation.

Use of chemicals in MDSP activities is very limited, except for seed treatment and pest control in cowpea production. We were informed that extension officers usually do chemical dilutions and spraying. MDSP could usefully explore the use Integrated Pest Management to reduce dependence on chemicals.

4.10 Appropriateness of technologies

MDSP works largely within the framework of locally available resources, and reduces demand on external techniques. Most of the crops being promoted are not new to the target areas. However, the production of improved varieties may demand more attention for maximising yields. Most farmers view this as a burden. Further, some of the introduced varieties taste different from local varieties, and in some cases this has led to rejection of introduced varieties.

One area of concern is the unit of packaging. Most rural communities consider the packaging to be limiting for those who want to grow areas less than a lima. We recommend that the packaging be reviewed to allow for those intending to grow less than quarter of a hectare in case of finger millet.

4.11 Responsiveness in support for democracy and good governance

The project has facilitated the formation of seed growers associations at community and District levels. Leadership of these associations is by democratic elections. This emergence of local institutions steered by locally elected leadership is a positive and welcome contribution to democracy and good governance institutions at the grass-root level.

5. Conclusions and recommendations

These are documented in the Executive Summary of this Annex.

Annex 5

Environmental Issues

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1. Introduction

This Annex is a summary of the environmental issues which were identified during the work of the above mission. Data and information have been gathered through focused discussions, interviews, field visits and review of relevant documents.

The matter of environmental sustainability and its future mainstreaming in Sida projects in Zambia is discussed in a wider context in Chapter 2 of the Main Report.

The Annex is in two parts. Chapter 2 presents the major environmental issues faced by Zambia, and the individual projects within Sida's Sector Support Programme. The other part is a schematic discussion of environmental issues as detailed in SIDA's Guidelines for Environmental Impact (Reference 108). The guidelines stipulate (a) an environmental impact study should be undertaken during project preparation, and (b) a review should be carried out during evaluation. To date, it has not been possible to establish whether environmental impact studies were undertaken for the three projects under the sector support programme during their project preparation stages.

2. Summary of environmental issues in Zambia

2.1 National environmental issues

Zambia has experienced a number of negative environmental impacts over the past decades, and in particular during the last ten years. The following is a summary of some of the causes and effects. At this stage, it should be noted that the current Sida-supported Projects in the agricultural sector are not themselves responsible for nation-wide environmental destruction and degradation. Indeed, most of the SIDA-supported projects are tending to favour better uses of the environment.

2.1.1 Deforestation

In the last 20 years, Zambia has suffered heavily from deforestation. It has not been possible to quantify the rate of loss of forest cover and biomass because no reliable figures are available. The view is based on reports and comparative observations made by members of the Evaluation Team over the last three decades. It is reported that satellite images exist for a few Provinces, but apparently not for the Provinces covered by SIDA's activities.

2.1.2 Population Increase

The single most significant threat to the environment in Zambia is the rapid increase in human population. The present growth rate is some three percent per year and the total population is now about 10 million of which some 4 million live in urban areas. Although the rural population density is not low by world standards, opening up land for smallholder has led to trees-felling, and mono-cropping of maize and other unsustainable cropping practices have led to various degrees of soil erosion and degradation.

2.1.3 Migration

One result of the economic reform programme and structural changes is a migration and return of staff and workers from urban areas (the mines and parastatal companies) to outlying areas in the Provinces. Government has initiated some resettlement programmes to ensure that the returnees have sufficient land and other resources to maintain their livelihoods. On the other hand, a considerable number of returnees are not covered by government resettlement programmes, but have simply returned to their villages of origin. In both cases, additional land is required for production and homestead development. The result is a further loss of forest cover and increased risks of soil degradation and erosion as well as changes in the microclimate.

2.1.4 Firewood

The increase in human population is causing a further pressure on the forest resources owing to the need for firewood. Most cooking in rural areas is done in the traditional way and requires substantial amounts of fuel wood or charcoal.

2.1.5 Building Materials

A further factor causing deforestation and its negative impacts is the need for building materials in rural areas. This is in most cases in the form of logged trees and other forest resources.

2.1.6 Crop Production

The introduction of new crop varieties, in particular hybrid maize, and to some extent improved varieties, leads to new land being brought under cultivation to increase production and farm income. This possesses a further threat to the forest resources.

2.1.7 Climatic Changes

Over the last decade, Zambia has experienced significant climatic change. The rain belt has moved to the northern parts of the country. This has led to drought conditions in the south, and excess rainfall in Luapula, Northern and Eastern Provinces. The result in most cases is poorer crop yields.

The climate has likewise changed at micro-level in areas which have suffered from heavy deforestation. Temperatures have increased while the rainfall has decreased, with further soil degradation and reduced agricultural production as the ultimate result.

2.1.8 Soil erosion and Degradation

A marked effect of the on-going deforestation process is its negative effect on soils. Erosion and degradation is rampant in many areas of the country, which is being further accelerated through unsustainable farming and the absence of fallow periods.

2.1.9 Chemicals

Zambia faces a major problem related to chemicals from industry as well as agriculture. This is presently causing serious pollution of water bodies, including larger ones like Lake Kariba, with adverse effects on water quality and the fauna and flora. Many streams and rivers are also polluted, and no longer provide water of acceptable quality for household usage.

It is likely that the groundwater very shortly will show signs of chemical pollution as well. This could prove very serious indeed for the country.

2.1.10 Biodiversity

Natural biodiversity in Zambia suffered heavily in the 1970s and 1980s. It is now reported to be on the recovery. However, farmers in villages visited during the Evaluation report that they have not been able to hunt smaller deer and birds (an important indicator of bio-diversity) during the past decade. In many areas, bush meat, including birds, were part of the traditional diet. Without doubt, the deforestation process has resulted in further loss of bio-diversity.

2.1.11 Existing Government Programmes

Zambia's Ministry of Environment and Natural Resources (MENR) is responsible for practically all activities and measures aiming at enriching and conserving the environment. A number of activities are presently taken care of by NGOs, some with financial support from donors. MENR has developed the National Environmental Action Plan of December 1994 (Reference 204), but is generally unable to implement activities because of lack of funds. The budget for 2001 amounts to Kwacha 4.3 billion.

The Environmental Action Plan includes programmes and activities aimed at institutional development, legislation, economic development and the environment, agriculture, renewable natural resource, tourism, mining, industry, human population, energy resources, environmental education, human settlement and environmental issues in the provinces. MENR is supporting LM&CF in Central, Eastern and Southern Provinces.

Other important GRZ programmes at present are: Reforestation activities under the Department of Forestry, Environmental Support Programme, Provincial Forest Programme, Country-based Environmental Programme, Zambia Forest Action Plan and the ADMADE Wildlife project.

MENR also aims at integrating environmental concerns and appropriate actions and activities across the different line ministries. It is also endeavouring to raise the awareness of environmental issues among the civil servants of other ministries. This said, there is little evidence of the MENR programmes or activities in the areas covered by the Sida-sponsored agriculture sector projects.

2.2 Environmental issues in the sida-sponsored projects

2.2.1 EEOA

We note that EEOA has contributed to the general national trend of deforestation, but on a minor scale only. The programme's facilitation component has targeted private entrepreneurs and small-holders through out-grower schemes. In some cases, this has led to the opening up of more land through cutting down trees and felling trees from existing cultivated land in order to crop larger areas.

It is also being reported from EEOA target areas that a large number of people have returned from the mines to take up farming activities. A number of the returnees are included in the EEOA programme and have opened up virgin land. There are some government resettlement programmes in the EEOA target Districts, but they are not covered by EEOA. It is unfortunately not possible to quantify the trends in human population and area of farmland because figures are not available.

In EEOA areas, it was observed that relatively large areas under cultivation were on sloping land. Farmers' tendency to fell all trees to maximise production is likely to lead to soil erosion and degradation.

Farmers' application, handling and storage of chemicals do not seem to be major environmental problems at present in EEOA areas. This is in part because use of chemicals is rare, owing to high prices. In addition, production recommendations of EEOA advise limited, if any, use of chemicals.

EEOA's REEF Component has constructed a number of weirs, culverts and bridges. The weirs are meant to regulate water flow of existing streams and to divert 30 percent of the water for irrigation purposes through a main canal with a number of outlets and field channels. The weirs and culverts are constructed in accordance with "The Water Supply and Sanitation Act" 1997, and are not intended to cause negative environmental impact. On the contrary, the weirs and culverts are likely to reduce soil and water erosion. The bridges constructed under EEOA are likewise meant to regulate water flow and therefore likely to reduce soil erosion.

In summary, we conclude that EEOA activities are not causing any major negative environmental impacts at present.

2.2.2 MDSP

MDSP is unlikely to cause major environmental negative impacts, although the possibilities below should be noted for future monitoring:

- Introduction and replication of improved varieties could lead to increased production and the opening up of new land, with a further reduction in forest cover.
- Introduction of improved varieties will also enrich the micro-biodiversity, with a slight risk of introducing alien pests and diseases.
- Improved varieties result in increased yields and, consequently, increased farm incomes. No incidences of mono-cropping or soil degradation measures have been observed in MDSP areas. However, they should be monitored by MDSP because of the present incomplete understanding of the importance of intercropping and crop rotation among farmers.
- It was noted that MDSP staff are very careful when handling chemicals. This applies to treatment of seeds, application, handling, storage and disposal of chemicals. Further, MDSP will only supply the exact quantum of a specific chemical to any seed grower.

2.2.3 LM&CF

LM&CF is meant to assist nation-wide attempts to introduce improved land management and conservation farming. Therefore, by its nature, LM&CF favours environmental sustainability. *Inter alia*, LM&CF promotes improved crop husbandry, crop rotation, intercropping, contour farming, conservation and tillage farming, reforestation, maintenance of ground cover, and other measures which protect the environment.

3. The Sida-sponsored projects in relation to Sida's guidelines

The following environmental assessment follows the sequence in SIDA's Guidelines for Environmental Impact with particular relevance to Agriculture (including livestock farming) and Forestry (Reference 108).

3.1 Land, water and air

Pollute or cleanse surface water or ground water, soil or air?

We conclude that the Sida-sponsored projects are not causing pollution of surface water, ground water, soil or air in a significant manner. The projects actively limit amounts of chemicals for crop production and treatment of seeds, and usage of chemicals is small.

Have an effect on land areas, which are sensitive to drying up or erosion?

It is noted that some EEOA farmers tend to fell all trees on their plots in order to maximize production outputs. This could lead to soil erosion. This risk is greater on sloping land, where top soils could be washed away.

LM&CF is having positive effects on soils and sloping lands through its technologies: reforestation, tillage, pot-holing, ridging, contour farming, crop rotation and intercropping.

Contribute to increasing the salinity of the soil or to areas becoming waterlogged, or lead to improvements in such areas?

Does not appear to be applicable to the projects.

Cause degradation as a result of forestry activities, other mechanical impacts, of overgrazing or movements of livestock, or reduce such degradation?

Does not appear to be applicable to the projects.

Cause an increase or decrease in the availability of surface water or ground water, locally or regionally?

EEOA includes a number of infrastructure tasks such as weirs, culverts, bridges and roads. Weirs are constructed so as to reduce discharge and increase availability of surface water down-stream during seasons with low rainfall.

Lead to greater surface run-off and less infiltration due to forestry activities, or counteract such effects?

Does not appear to be applicable to the projects.

Lead to increased or decreased discharges of fossil carbon dioxide, methane or other greenhouse gases?

The Sida-sponsored projects do not contribute to discharges of fossil carbon dioxide, methane or other greenhouse gases in any significant way.

Lead to increased or decreased discharges or ozone-depleting substances?

Does not appear to be applicable to the projects.

Develop systems, which, permit sludge, nutritive salts or other waste products to be taken care of or to be returned into eco-cycles?

Is not applicable to the projects.

3.2 Biological biodiversity

Exploit, or substantially change important or sensitive ecosystems (for example areas which are covered by natural vegetation), or restore such systems?

The Sida-sponsored projects are not located in the immediate vicinity of sensitive ecosystems and will therefore neither exploit nor change them.

Reduce natural bio-diversity through threatening plant or animal species, or increase diversity by supporting and protecting ecosystems and species?

Between them, the projects aim at introducing improved varieties, conservation farming techniques, farming systems, increased agricultural production and improved land management. It is not expected that the projects pose any threat to indigenous animal and plant species, since they maximize production through improved land management husbandry practices. Rather, the projects are likely to conserving existing biodiversity through improved land management and increased farm income.

Encourage or discourage local sustainable use of wild and cultivated bio-diversity, local animal and plant breeding and the development of knowledge of local bio-diversity?

Please refer to the item above.

Contribute to, or counteract, the introduction of new species in areas where they do not belong naturally?

MDSP introduces tested and certified varieties. No negative environmental impacts have been noted.

Result in a greater or smaller risk that plant and animal diseases are spread to cultivated or wild species?

We have not noted any risks to existing cultivated and wild species arising from project activities.

Result in greater or smaller risk of the spread of transgenic organisms or genes from such organisms?

Does not appear to be applicable to the projects.

3.3 People

Result in a greater or smaller risk that diseases or other negative effects on people's health are spread?

Is not applicable to the projects.

Improve or impair the living conditions of the selected population or nomadic groups?

Is not applicable to the projects.

Make it easier or more difficult, directly or indirectly, for the local population to move or to use natural resources inside or outside the project area?

Does not appear to be applicable to the projects.

Increase or reduce conflicts in respect of the present use or tenure of the land?

Has not been observed to apply to the projects.

Damage or protect archaeological relics, places or areas of religious, cultural or historic value, and cultural monuments or make considerable changes to areas of great beauty?

Is not applicable to the projects.

Result in migration of people out of or into the project area?

Has not been observed to apply to the projects.

3.4 Chemical effect

Use chemicals, which are difficult to break down?

MDSP and EEOA use limited amounts of chemicals. However all are environmentally friendly, and are applied in small quantities and recommended doses.

Have the result that large areas are exposed to chemicals?

Has not been observed.

Result in an increased or decreased risk that chemicals are unintentionally spread, by air, water or via food chains, through the use of chemicals, or through poor storage conditions or inadequate facilities for the destruction of waste products?

This has not been noted. Chemicals under the programme are handled with care and stored behind lock and key.

Contribute to a situation in which untrained personnel handle chemicals, or contribute to training personnel in handling chemicals and providing them with protective equipment?

Does not appear to be applicable to the projects.

Result in acute and/or long-term health hazards for personnel who handle chemicals or for the population in the area, or reduce such risks?

Has not been observed to apply to the projects.

4. Recommendations

Below are some recommendations to be considered for inclusion in any future Sida-sponsored agriculture sector programme and projects. If such a programme were to go ahead, these issues should be taken into account from the planning stage and throughout implementation. The recommendations aim at introducing and strengthening interventions for improving and enriching Zambia's environment generally.

4.1 Reforestation

High priority should be given to reforestation, due to the present needs and problems being faced by the country. It is recommended that reforestation take place primarily through the introduction and improvement of agro-forestry in farming systems (as already being promoted under LM&CF). Better tree-cover will help greatly to reduce loss of topsoil and degradation of sloping land. Furthermore, trees can be intercropped with field crops, and small wood-lots can be established to ensure firewood and forest products for building materials. The following tree species are recommended: *Cajanus cajan*, *Sesbania sesban*, *Tephrosia vogelii*, and *Gliricidia sepium*. Besides these, a number of *Leuceana* varieties can be recommended.

It is further recommended that each future project sets targets for these activities (including appropriate breakdown according to Districts and specific target areas).

4.2 Increased agricultural productivity

High pressure on land with deforestation is one negative effect which can, to a very large extent, be alleviated through increased agricultural productivity on existing land. Improved land management, appropriate agro-forestry farming systems, soil and tillage conservation measures, intercropping, crop rotation, crop diversification, improved varieties, kraal manure are all methods for maximising output from existing cropped areas.

Moreover, a stronger farmer-extension-research linkage is most important to ensure that farmers can face the challenge of increasing the productivity in a proactive manner.

4.3 Firewood and building materials

It is recommended that farmers expand their present practices to include agro-forestry activities within their farming systems. These could include cultivation of fast-growing trees for firewood and building materials.

4.4 Soil erosion

Within the current Sida programme, LM&CF and CFU are already addressing soil erosion. In future, the technologies developed by these two projects should be introduced and phased to cover all areas where Sida's programme is operational. Contour farming and intercropping of trees (with nitrogen fixating capability) should be promoted. In addition, the well-tested "Sloping Agricultural Land Technologies" (SALT) could be introduced.

4.5 Chemicals

Campaigns and training activities should be integrated in all the components and projects under the programme to address proper application, handling and storage of chemicals.

4.6 Fuelwood stoves

Development of fuelwood-saving stoves could be promoted. This approach would reduce firewood use for cooking food. A fuelwood-saving stove requires only one third of the fuel, and is also time-efficient.

4.7 Environmental campaigns

There is a clear need to improve awareness of the value of environmental protection. A new Sida-sponsored programme should target schools, colleges, civil servants, and cooperative groups to develop and implement environmental education and awareness campaigns.

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Annex 7

Acknowledgements

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Embassy of Sweden and Sida

Kristina Svensson	Ambassador
Dr Goran Hedebrö	Counsellor
Dr Torsten Andersson	First Secretary, Natural Resources and Environment
Ms Marie Holmlund	Assistant Programme Officer, Natural Resources and Environment
Carl Hellman	Desk Officer, Department for Africa

Representatives of other bi-lateral donors/organisations in Lusaka

Helen Gunther	USAID
Magne Grova	Adviser, Royal Norwegian Embassy
Given Lubinda	Adviser, Royal Norwegian Embassy
Per Rasmussuen	Secretary, Royal Danish Embassy
Madz Saandow	Ambassador, Royal Danish Embassy
Bink van Walsen	Adviser, Netherlands Embassy

Representatives of multilateral donors/organisations

Gregory Chilufya	UNDP Programme Analyst, Governance
Richard Fuller	Resident Representative, FAO, Lusaka
Alex Mwanakasale	World Bank, Lusaka

MAFF staff, Lusaka (including MOFED staff in FMU, MAFF)

Mr Akayombokwa	Deputy Director, Land Husbandry
Mr A K Banda	Director, Cooperatives and Marketing
Mr Albert Chalabesa	Deputy Director of Research (Soils and Crops), Mt Mukulu
Mr Brian Chivunda	Chief Agricultural Officer, Field Services
Kezia Katimba	Planner, Policy and Planning Branch (responsible for Swedish cooperation)
Mr A Mtelekesha	Planner, Policy and Planning
Mr F N Mukelabai	Chief Accountant, Financial Management Unit
Mr Steve Mwale	Senior Accountant, Financial Management Unit
Mr Herbert Mwansa	Chief Land Husbandry Officer (and National Coordinating Officer, LMCF)
Dr Faustin Mwape	Coordinator, ASIP Successor Programme Formulation Committee
Mr Geoff Mwende	Principal Accountant, Financial Management Unit
Mr Neiburt Phiri	Planner, Policy and Planning
Mr Owen Phiri	Ag Principal Accountant, Financial Management Unit
Mr J J Shawa	Deputy Director, Policy and Planning
Edward Zulu	Seed Control and Certification Institute, Lusaka

Lusaka Representatives of Other Ministries

Lubinda Aongola	Director, Planning and Information Department, Ministry for Environment and Natural Resources
Martha Linyando	Ministry of Community Development and Social Services (Chairlady of Targeted Food Security Pack Project)
Mr Molambo	Ministry of Finance and Economic Development
Mr Mpondo	Ministry of Finance and Economic Development
E C Simukoko	Ministry of Finance and Economic Development

EEOA Project Staff

Joyce Banda	Programme Officer
Barbara Collinson	Adviser on Facilitation
Mirjam Hast	Financial Services Coordinator
Henrietta Kalinda	Monitoring and Evaluation Coordinator
Edna Maluma	Facilitation Field Adviser, Eastern Province
Godfrey Munyoro	Marketing Coordinator
Leonard Mwansa	Programme Accountant
Olle Otteby	National Coordinator
Lyson Phiri	Facilitation Coordinator
Emil Sandstrom	Associate Expert, Northern Province

LM&CF Project Staff

Dr Roy Chiti	Adviser, Eastern Province
Lars-Ove Johansson	Senior Project Adviser
Glenda Kasuba	Socio-economics and Gender Adviser
Kelvin Luputa	Reporting and Monitoring Adviser
Maimbo Malesu	Training Adviser
Par Oscarsson	Reporting and Monitoring Adviser
Dr Kebede Tato	Adviser, Southern Province

MDSP (Project Staff and Partners)

Winter Chabasa	Project Director (and Managing Director, ZAMSEED)
Moses Chansa	Provincial Coordinator, Northern Province
Tembo Kaonga	Southern Province Coordinator
Freda Luhila	Programme Against Malnutrition
Marx Mbunji	Programme Against Malnutrition
Harry Ngoma	Project Coordinator
Helen Samatebele	Programme Against Malnutrition
Pamela Thole	Project Manager
Members of	Seed Growers' Committee, Chikakala
Members of	Seed Growers' Committee, Chinsali Central
Members of	Seed Growers' Committee, Gwembe
Members of	Seed Growers' Committee, Monze
Members of	Women's Seed Growers' Committee, Mpika

NGO Partners

Charles Kawimbe	District Coordinator, World Vision International, Katete
Mrs Freda Luhila	Programme Against Malnutrition

Other Key Cooperating Partners in Lusaka

Peter Aagaard	CFU
A N Akalonga	ZCSD
Dr Martin Banda	Partnership Forum, Lusaka
Susie Burgess	Organic Producers' Association of Zambia
Boston Chisenga	Cotton-growers Association of Zambia
Frank van Dixhoorn	Rural Development and Institutions Planner, DSI Consultants, Lusaka
Dutch Gibson	CFU
J M Katongo	MIBS
Jim Lafleur	Zambia Agricultural Technical Assistance Centre
Dr Anthony Mwanaumo	Agriculture Consultative Forum
Robert van Ottrdyk	Cheetah Zambia
Dr Uwe Otzen	GTZ Agriculture Sector Evaluation Mission
Hildegard Schorry	GTZ Agriculture Sector Evaluation Mission
Anne Turner-Nzungwo	Organic Producers' Association of Zambia

EEOA, Chadiza District

Maximo Chitambi	DACSEE member
Mrs Chulu & outgrowers	Kasimule farm
Beatrice Mbewe	DACSEE member
John Msimuko	District Coordinator
Joyce Ngoma	DACSEE member
Boyd Phiri	Head Facilitator
Brighton Phiri	Facilitator
Milson Sakala	DACSEE member
Bonaventure Siantumbu	District Planning Officer/DACSEE member
Felix Tembo	Facilitator

GRZ, Chadiza District

D Banda	Livestock Officer
F Chitambala	LMCF Officer
Moses Katundu	National Agriculture Information Service
T Kumwenda	Block Extension Officer
Dr Brian Mpande	District Veterinary Officer (Acting District Agricultural Coordinator)
Mrs Elizabeth Muma	District Administrator
Luckson Zimba	MAFF/LMCF coordinator
P M Zulu	Extension Methodologist

GRZ, Chipata

Charles Lwenje	Block Extension Officer, Chipata South
Tedson Mbozi	District Coordinator, LMCF, Chipata South
Benson Musukwa	Camp Extension Officer, Mukanda, Chipata North

Rabby Mulangala	Provincial Land Husbandry Officer (and Eastern Province LMCF Coordinator)
Mr Mumba	Senior Field Services Coordinator, MAFF
Mr Lovemore Mutale	Provincial Range and Pasture Specialist, LMCF
Mr Nkoma	National Agriculture Information Service
Judith Nyiienda	Camp Extension Officer, Chipata South
Mr Phiri	Physical Planner, Ministry of Local Government
Amon Sakala	District Coordinator, LMCF, Chipata North
Mr William Silweya	Permanent Secretary, Eastern Province
Mr Sishekanu	Provincial Agricultural Coordinator

GRZ, Katete District

Cyprian Banda	Clerical Officer
Sipiliyano Bemela	Representative, DA's Office
Fred Chilufya	District Agricultural Coordinator
Brime Chivubwe	District LMCF Coordinator
Jonathan Phiri	Black Extension Officer

EEOA, Katete District

Christine Chiwala	Facilitator
Elias Lungu	Facilitator
Peter Mutale	Head Facilitator
Moses Mutonga	Facilitator
Dr Hoya Phiri	Community Extension Officer, Matipa
Venacio Sekala	District Coordinator
Mambers of	Community Extension Agents
Members of	Intersectoral Committees
Members of	REEF Committee
Members of	Interest Groups

EEOA, Petauke District

Gladwell Banda	Local Contractor
James Banda	BOS Manager
Mabvuto Banda	Facilitator
Alfred Chibinga	Facilitator
Nachili Kaira	District Coordinator
Leslie Masamba	Technical Consultant
Brenda Moono	Facilitator
Obby Mwale	Local Contractor
Lazarous Mwenda	Trainer/entrepreneur
Innocent Nogoma	Head Facilitator
Grace Nyone	Salaula Savings Group
Adamson Phiri	Community Chairman, Chileka
Jose Phiri	Local Contractor
Muya Phiri	Marketing Agent
Rodrick Phiri	Marketing Officer, IDE

John Sakala	Marketing Agent
Valentine Sakala	Trainer (SYB)

Other Partners, Eastern Province

Valencia Banda	Accounts Clerk, Dunavant Cotton, Katete
Hendrix Kambwambwa	Accountant, Dunavant Cotton, Katete
Charles Kawimbe	Project Coordinator, Integrated Agro-forestry Project, World Vision, Katete

GRZ, Petauke District

Annie Bulaya	Farm Power
Siame Elijah	DMCO
Andy Masenga	Petauke District Council Secretary
M Mwale	Representative of DA, Petauke
Moses Mukuka	Crop Husbandry Officer
Magdelene Mutinta	Senior Agriculture Officer
Chabala Mutuna	District Agricultural Coordinator
Sandford Mwale	District Soil Conservation Officer (LMCF District Coordinator
Stockson Sakala	Camp Extension Officer, North Nyamphande Settlement Scheme
Emmanuel Tembo	Camp Extension Officer, Chiumanyama
Regina Zulu	National Agriculture Information Service

GRZ, Monze District

Chris Chipamba	National Agriculture Information Service
Frank Lubasi	District Agricultural Coordinator
Josephat M'Gabeli	Forestry Officer
Reuben Mundia	LMCF Coordinator
James Mwandwe	Senior Agriculture Officer
Evaristo Nyanoka	Provincial Land Husbandry Officer (and Southern Province LMCF Coordinator)
Daniel Sangulukani	Crop Husbandry Officer

Others Partners, Monze

Davis Howes	CFU Field Technician
Jeremiah Kasalo	ZNFU Officer, Monze
Nsansaula Nervous	Progaamme Manager, DAPP
Sunday Silungwe	CFU Senior Field Coordinator
Shatis Vlahakis	CFU Coordinator

GRZ, Choma

Mr Hamwele	Camp Extension Officer, Batoka
N Msuslwe	District Agricultural Coordinator
James Mwandwe	Field Services, MAFF
Tembo Newton	Crop Husbandry Officer, MAFF
Colin Nkatiko	Provincial Agricultural Coordinator, Southern Province

Other Partners, Choma

Anthea Dickie	Adviser, ASSP Programme (GRZ), Southern Province
Dierk Hesselbach	Adviser, ASSP Programme (GRZ), Southern Province
Raymond Hoffmann	Senior Adviser, ASSP Programme (GRZ), Southern Province
Reinhard Metsch	Adviser, District Development Programme (GRZ), Masabuka
Mr Mukinda	Hammer-mill owner/operator
Samson Muyembe	ZNFU (Swedish Cooperative Project)
Gloria Mwale	Africare
Basil Mweempha	Support Adviser, District Development Programme (GTZ), Masabuka
Dan Phiri	World Vision
Florence Phiri	ZNFU (Swedish Cooperative Project)

GRZ, Mpika District

Robert Banda	Crop Husbandry Officer/Seed Inspector
Fidelis Bwalya	Camp Extension Officer, Chakopo
Jeremiah Chipeta	Camp Extension Officer, Mpika Central
P K Lungu	Chairman, Board of Environment
P C Lupenga	JTO
Like Mukelabai	District Secretary
Robert Saili	Camp Extension Officer, Mpika Central
Brighton Sichola	Farm Management Officer/DMCO

EEOA, Mpika District

F Teddy Chibende	Outgrower, Chipundu
Doris Kangwa	Head Facilitator
Rose M Kalolo	DACSEE Vice-Chairperson
Mr Kanyeleti	and bee-keepers
Evans Luambia	District Coordinator
C C Mubangu	DAMU Contractors
L K Mugala	Facilitator
J C Musawa	DACSEE member/outgrower
Raphael Mweemba	Outgrower, Chipundu
Lazarous Nyawali	Technical Consultant
Anne Sabwe	Trainee, Salon Business
Vincent Siakwale	Savings & Credit Promoter, MBT
Hammer Simwinga	Outgrower Manager
M Melvin Siwale	Facilitation Field Adviser
Mr Shadreck Tembo	and outgrower scheme members, Mpika
Members of	Bee-keepers Interest Group, Mufubushi
Members of	Outgrower Group, Mufubushi
Members of	REEF Committee, Mufubushi Road Rehabilitation
Members of	Savings Group, Mufubushi
Members of	Vegetable Group, Mwaiseni

GRZ, Chinsali District

Jeremiah Hantolo	District Agricultural Coordinator
Cletus Mubanga	District Administrator

EEOA, Chinsali District

Davison Bowa	Head Facilitator
F Chimpinde	Chairperson, GD General Dealers
Jacqueline Hamainda	Facilitator
Martha Kunda	DACSEE member
Edward Manda	District Coordinator
Vincent Mubanga	Coffee farmer, Chinsali
Lackson Mumbi	DACSEE member
Dick Mweemba	Secretary
Donald Nama	DACSEE member
Thomson Sabwa	Facilitator
Theofister Serenje	Facilitator
Members of	Bakers Interest Group, Chinsali
Members of	Business Association, Chinsali
Members of	Coffe Interest Group, Kabangama
Members of	Savings Group, Chinsali
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Other Partners, Northern Province

Lubasi Latangu	Project Manager, World Vision, Mpika
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Department for Central and Eastern Europe

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S-105 25 Stockholm, Sweden

Tel: +46 (0)8-698 50 00. Fax: +46 (0)8-20 88 64

Telegram: sida stockholm. Postgiro: 1 56 34-9

E-mail: info@sida.se. Homepage: <http://www.sida.se>