

Research into Action Synergising Research and Outreach for Development and Food Security in Malawi

Mid-Term Review of the Agricultural Research
and Development Programme (ARDEP)

Ramji Nyirenda and Arne Tostensen

R 2009: 3

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Acronyms and abbreviations

ADD	Agricultural Development Division
ADP	Agricultural Development Programme
AEDO	Agricultural Extension Development Officer
AIDS	Acquired Immune Deficiency Syndrome
AMG	ARDEP Management Group
APB	ARDEP Programme Board
AQFS	Aquaculture & Fisheries Science
ARDEP	Agricultural Research and Development Programme
BCA	Bunda College of Agriculture
BCDP	Bunda Capacity Building Programme
CARD	Centre for Agricultural Research and Development
CMVD	Cassava Mosaic Virus Disease
DADO	District Agricultural Development Officer
EPA	Extension Planning Area
FAO	Food and Agriculture Organisation of the United Nations
FICA	Flanders International Cooperation Agency
FORUM	Forum on Agricultural Resources Husbandry (Rockefeller Foundation)
HIV	Human Immunodeficiency Virus
ICT	Information and Communications Technology
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDEAA	Initiative for Development and Equity in African Agriculture
MoAFS	Ministry of Agriculture and Food Security
M&E	Monitoring and evaluation
MSc	Master of Science
MWK	Malawi Kwacha (currency)
NAPA	National Adaptation Programme of Action
NARS	National Agricultural Research System
NASFAM	National Smallholders' Association of Malawi
NGO	Non-Governmental Organisation
NOK	Norwegian Krone (currency)
Norad	Norwegian Agency for Development Co-operation
NRM	Natural Resource Management
PAC	Project Advisory Committee
PCO	Programmes Coordination Office
PhD	Doctor of Philosophy
PIT	Programme Implementation Team
PRIMARO	Poverty Reduction in Malawi Using Agricultural Research and Outreach
SWAP	Sector-wide Approach
ToR	Terms of Reference
UMB	Norwegian University of Life Sciences
Unima	University of Malawi
VSL	Village Savings and Loan

Preface

Bunda College of Agriculture, through the Norwegian Agency for Development Co-operation (Norad) and the Norwegian Embassy in Lilongwe, engaged the services of one Norwegian and one Malawian consultant to conduct a mid-term review of two distinct yet interlinked programmes based at Bunda (see the appended Terms of Reference). The two programmes are: 1) The Agricultural Research and Development Programme (ARDEP); and 2) The Bunda Capacity-Building Programme (BCDP). This report presents the findings and recommendations of the review team as far as ARDEP is concerned. A separate companion report deals with the BCDP. The two reports can be read independently of each other but cross-references are made in both reports so as to emphasise their close inter-relationship.

This review follows an evaluation undertaken three and a half years ago by the same team, which in our view has contributed to ensuring continuity. Even though the 2005 evaluation came rather late in the day when proposals for a new phase were already in an advanced stage of preparation, we have noted that many of our observations and recommendations have indeed been fed into the design of the two programmes now under review.

We would like to underscore that, by definition, a mid-term review offers an opportunity for making adjustments to the way in which activities are conducted with a view to enhancing effectiveness and achieving the objectives. As such it is essentially a learning device for improving performance in the remainder of the programmes' life time.

Lilongwe, November 2008
Ramji Nyirenda and Arne Tostensen

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Beyond the written material made available to us, much of the information underpinning the findings of the review stems from personal interviews (see the appended list of persons consulted). We are very grateful to all our informants for generously sharing their valuable time with us and for providing frank responses to our questions. Above all, we are deeply grateful to all the respondents who in various capacities were involved in the micro projects in Emfeni, Manjawira and Chingali, not least the farmers themselves as the ultimate beneficiaries of ARDEP. The information imparted by them was invaluable for this review. Moreover, their commitment and enthusiasm were contagious and a great inspiration to us.

We would also like to extend our thanks to Norad and the Norwegian Embassy in Lilongwe for commissioning us for this interesting assignment, *in casu* Mr. Augustine Chikuni and Mr. Arild Skåra.

Executive summary

1. This report summarises the findings of a mid-term review of the Agricultural Research and Development Programme (ARDEP). A separate companion report deals with the Bunda College Capacity Building Programme (BCDP).
2. Much work went into reconceptualising and redesigning the erstwhile PRIMARO programme into what became ARDEP as a five-year programme with national coverage, the overriding objective of which is to contribute to enhanced productivity in Malawi's agricultural sector with a view to improving the quality of life and social well-being of Malawians through a powerful, effective, and efficient national research and outreach system.
3. The methodology included perusal of existing documents, direct observation during field visits, and qualitative interviews with key stakeholders.
4. The evaluation of Phase II of the Bunda capacity building programme revealed that the College was subjected to widespread criticism for living in an academic cocoon unable or unwilling to reach out to the ultimate beneficiaries of the research conducted. Three and a half years hence there has been a transformation of collaborative relationships into a workable model where all relevant stakeholders are involved from the scientists, departments of the MoAFS, NGOs, to the farmers at the grassroots. This was a remarkable development that augurs well for the future.
5. ARDEP had long gestation and inception periods, resulting in the programme lagging behind schedule. However, given the tension observed in 2005 between various stakeholders considerable time was required to mend those relations and to create rapport and to forge workable partnerships at all levels among many actors of great diversity. Attitudes and prejudices change only slowly. To capture this complexity in a functional programme design is both difficult and time-consuming. Of particular importance was the sensitisation and mobilisation of the farmers themselves as the ultimate beneficiaries.
6. The novelty of ARDEP is its mode of operation. First, its defining characteristic is the involvement of multiple stakeholders across sectors into a coherent system of implementation so as to ensure concerted action towards common goals. Second, the micro projects are based on demand-driven research and outreach from the ultimate beneficiaries at the grassroots: the farmers themselves, in conjunction with and on the advice of the scientists. In such a bottom-up approach extensive sensitisation and mobilisation have been necessary. Third, the pilot micro projects are fully integrated into established government structures, especially those of the Ministry of Agriculture and Food Security (MoAFS). ARDEP fits squarely into the overall government policy framework for the agricultural sector: the Agricultural Development Programme (ADP).
7. There is a legitimate concern that the cost of each of the 19 pilot projects is on the high side and that the cost of a major scaling-up might be more than the state budget can absorb. However, the pilot projects are realistically expected to be self-sustaining after their productive capacity has been heightened. The anticipated scaling-up exercise does not need to be nationwide at one go. It could be incremental over a longer period of time so as to make it easier to accommodate the cost within constrained budgets. If a predominantly agrarian country is unable to prioritise agriculture as the most critical sector of the economy the inevitable conclusion is that Malawi will be perpetually dependent on donor support.
8. The ARDEP concept and design are definitely sound. The current structure and functionality of ARDEP is arguably its greatest achievement to date, especially in view of the point of departure with less than harmonious relations between stakeholders in the past. This is not to deflect from the substantive results achieved but due to the delays of start-up the review team has found it somewhat premature to assess the substantive results. Major results can be expected in the remainder of the programme's lifetime.

9. The review team made field visits to seven micro projects in Emfeni, Manjawira and Chingale EPAs. Although the preliminary results are very encouraging it is too early to make definitive judgements about output levels. It is particularly difficult to assess the long-term impact of the pilot micro projects around the country through scaling up the programme. They are all less than a year old. This notwithstanding, there is a positive indication at the project goal level. ARDEP has produced a powerful, effective, and efficient national research and outreach system for the agricultural and natural resources sectors.
10. On the negative side, the pilot projects are being developed and implemented without clear environmental and climate change impact guidelines. Their implementation is behind schedule due to a number of factors, especially the lengthy ARDEP inception phase.
11. ARDEP has made a very good start with promising prospects if potential risks are managed and mitigated in a timely manner. At the core of the success potential are the enthusiasm and the sense of ownership shown by the beneficiaries at the grassroots level. Timely delivery of inputs, supervision, and frequent M&E are key ingredients to allow the enthusiasm and ownership to come to fruition.
12. Almost all the ARDEP micro projects fit into the climate change impact adaptation strategy, especially when dealing with food security and sustainable development at the household level. But they are susceptible to disruption or destruction from environmental catastrophes such as erosion and flooding.
13. The idea of micro projects on a pilot basis in different localities around the country is that the experiences gained from them should be used in scaling up operations in order to create ripple effects on a broader scale. A precondition for this ambition to be realised is that all projects document carefully what is being done and what the outputs are. Towards that end the M&E specialist has developed, in conjunction with the project teams, a Performance Indicator Tracking Table. This is a good start but the teams, right down to the farmers, need training in the use of this table to enable them to fill in the blank cells on indicators.
14. The sustainability of the micro projects themselves as discrete entities is reassuring, and the potential for scaling up is greatly enhanced by the way in which ARDEP is integrated into the established structures of the agricultural sector. ARDEP fits very well into the overall policy framework for the agricultural sector – the Agricultural Development Programme (ADP) – and conforms to its precepts. At the district and Extension Planning Areas (EPAs) the ARDEP concept has been operationalised to form a suitable vehicle for implementation, not only during the programme’s life cycle but also when external funding inevitably ceases. A model of technological outreach has been arrived at. It promises to be sustainable because the government is heavily involved as a key player.
15. To ease the pressure on the annual state budgets, there is a case for establishing an endowment fund for continuously supporting synergies between research and development programmes in the agricultural sector. The government and the donor community alike could contribute to its capitalisation.
16. The relevance of ARDEP is very high in terms of the ADP, poverty reduction and food security. All micro projects are implicitly addressing climate change as adaptations. But they address climate change mitigation to a lesser extent.
17. Owing to the implementation delays it is somewhat premature to state categorically whether the stated programme goals have been achieved. Work is in progress and it is the review team’s considered opinion that the majority of the objectives will be reached eventually.
18. The efficiency of ARDEP is difficult to judge. An evidence-based quantitative assessment of efficiency has not been feasible. However, by and large, the lengthy processes leading to the workable model of collaboration for outreach – however protracted and costly – have been necessary. This model – a major achievement of ARDEP to date – is an output of this expenditure. The expected outcomes from the micro projects and their potential for scaling up will prove the time and money well spent.

19. It is infeasible to make a credible assessment of the long-term impact of ARDEP at this early stage. A proper assessment of durable impact would require a panel study or a longitudinal investigation of developments during a certain time span against a baseline at the start of the programme.
20. Given the integration of ARDEP within the overall policy framework of the ADP; its integration into the established structures of the agricultural sector; the bottom-up, demand-driven model adopted; and the observed ownership at the grassroots, the sustainability prospects are very good.
21. ARDEP carries some risks such as the 2009 general elections which may result in a new government pursuing a different set of policies and priorities; the micro-projects may lose momentum if problems arise and cause delay and despondency unless such problems are dealt with expeditiously; the incomplete decentralisation process; the lack of experience in Malawi with privatised extension services which are being contemplated by the government; high staff turnover at all levels of ARDEP which may undermine continuity; frequent changes of the composition in ARDEP's steering structure; the HIV and AIDS pandemic which is a continuous threat to the programmes progress to the extent staff and beneficiaries are affected.
22. The recommendations include:
 - a) It is recommended that the ARDEP programme be extended beyond 2010 in view of the delays that were justified in terms of the need to forge new collaborative relationships and to design a model for translating research and technologies into action for the benefit of the farmers.
 - b) It is recommended that the documentation of activities and achievements be improved by more systematic use of the Performance Indicator Tracking Table under the auspices of the M&E specialist. Training in the use of the table by the implementers at the grassroots is no doubt needed.
 - c) The grassroots orientation of the programme must be retained with a view to ensuring that the benefits accrue to the farmers.
 - d) It is recommended that problems be addressed swiftly as and when they arise to forestall delays and damage to projects (ref. Ntcheu DADO case).
 - e) The programme must produce an asset maintenance plan that covers office equipment, vehicles, buildings, and infrastructure at all levels of the programme.
 - f) The extension service inadequacies at the EPA level must be addressed in conjunction with the Ministry of Agriculture and Food Security.
 - g) It is recommended that the environmental aspects of the programme be highlighted with a view to taking fully on board their repercussions, especially with regard to climate change. This should be done in the form of a strategy in line with the ADP and NAPA for the management of environmental challenges and climate change at the micro project level.

Preamble

This review is taking place half way through the ARDEP programme period. Its purpose, therefore, is to take stock thus far with a view to making adjustments to the activities and the course of action that have emerged. As such, it fits into the general monitoring and evaluation efforts of the programme, with the added trait of being independent. It is not an end-of-phase evaluation, however, which normally would pass a definitive judgement of achievements.

The March 2005 evaluation of Phase II of Norwegian support to Bunda College of Agriculture – undertaken by the same team as the present mid-term review – forms an important backdrop to and in many respects serves as a reference point for this review. Indeed, a number of our observations and recommendations from 2005 have been heeded in the formulation of ARDEP. Consequently, there is a measure of continuity of purpose.

The existing ARDEP took its cue from the erstwhile draft project document Poverty Reduction in Malawi Using Agricultural Research and Outreach (PRIMARO), the primary goal of which was to improve the performance of Bunda College of Agriculture in learning, teaching, research and outreach to enable the College to play a significant role in the development of the country and to attract other sources of funding for its development programme. However, the original PRIMARO programme was split into two separate yet inter-related programmes: the Agricultural Research and Development Programme (ARDEP) and the Bunda College Capacity Building Programme (BCDP).

While borrowing from the concepts developed in the PRIMARO proposal, a lot of work went subsequently into reconceptualising and redesigning what eventually became ARDEP as a five-year programme with national coverage. In this process, many actors were involved drawing on their respective experiences in Malawi and abroad. The Malawian actors included all those that eventually became partners in ARDEP. The international actors included, *inter alia*, the Malawian branch of the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) and the Norwegian University of Life Sciences (UMB), both of which provided inputs to the design of ARDEP. The latter has been involved with Bunda College through successive phases of Norwegian support.

The overriding goal of ARDEP is to contribute to enhanced productivity in Malawi's agricultural sector with a view to contributing towards the improvement of the quality of life and social well-being of Malawians through a powerful, effective, and efficient national research and outreach system. More specifically, the objectives were set out as follows:

- To increase agricultural production and productivity, the utilisation of, and access to food as well as natural resources through high-quality, demand-driven agricultural research;
- To facilitate and promote widespread uptake of relevant and appropriate interventions through a pluralistic and demand-driven outreach system;
- To identify and promote the implementation of ready technologies or best practices that address poverty reduction, food and nutrition security, and efficient natural resources management, especially in women-headed and HIV/AIDS-affected households;
- To enhance the capacity of Malawians to coordinate, manage and implement agricultural research and outreach programmes.

Given the finite land resources in Malawi, attention must be directed towards enhanced productivity of land and labour alike. The constraints to improved agricultural productivity in Malawi are many.

The main ones include: (a) declining soil fertility; (b) recurrent droughts affecting especially the cultivation of cereals; (c) the use of low and inappropriate technologies; (d) inadequate dissemination of improved technologies owing largely to a high ratio of farmers to extension workers; (e) poor linkages, coordination and networking among stakeholders; (f) inadequate capacity of institutional structures, including farmers' associations and cooperatives; (g) the HIV and AIDS pandemic; (h) a gender imbalance favouring men in the distribution of benefits; and (i) inappropriate natural resource management under severe constraints.

With regard to methodology and collection of information, the ARDEP review team has used three main tools. First, a sizable number of documents was made available to us for perusal. They included programme proposals, overviews, progress reports, memoranda, reviews, etc. This documentation was an important source of information but needed to be complemented by other sources. Second, direct observation at Bunda, but particularly during the field visit to the micro projects, added nuance and provided additional information that cannot be read between the lines of reports. Visual impressions and direct contact with stakeholders, especially the farmers at the grassroots added meat to the skeleton that written information provides. Third, qualitative interviews with a range of stakeholders at different levels provided further information that could be used in corroborating evidence obtained from divergent quarters. In other words, given the time constraints which precluded more comprehensive surveys, we have applied a method of triangulation and inter-subjective validation. There may be cases, however, where the evidence could not be validated in a definitive sense. In those cases, therefore, we have pointed out inconsistencies and paradoxes and raised questions for further discussion and investigation.

The ToR require us to assess ARDEP in terms of: (i) relevance; (ii) effectiveness; (iii) efficiency; (iv) impact; and (v) sustainability. These are standard dimensions routinely included in all ToR. However, some qualifications are justified. The dimensions of efficiency and impact present particular challenges in view of the time and resource constraints imposed upon us. We find it not feasible to give a thorough evidence-based quantitative assessment of efficiency, i.e. the appropriate ratio of resource use to outputs and outcomes. For that to have been feasible, we would have had to make deeper investigations into expenditure patterns and volumes in relations to budget allocations. The time constraints have not allowed for that. The best we can do is to offer more or less plausible qualitative arguments to buttress our general assessment of efficiency. Similarly and *a fortiori*, it is infeasible at this stage to make a credible assessment of the long-term impact of ARDEP. To do so would have required a panel study or a longitudinal investigation of developments during a time span stretching from the inception of the programme (forming the baseline) to a subsequent point in time down the line to ascertain what lasting impacts can be observed. In the circumstances, we can do little more than advancing qualitative arguments about the prospects and likelihood of future impact. Moreover, we find it inappropriate to include long-term impact as part of a mid-term review. With these qualifications of a methodological nature the report below sets out to enumerate our findings.

Introduction

We take as a point of departure the observed situation at the time of the March 2005 evaluation. At that time we heard widespread criticism of Bunda College of Agriculture for living in an academic cocoon with only slight ability or willingness to engage in outreach activities to the broader agricultural sector and to the ultimate beneficiaries: the farmers at the grassroots who frequently experience food insecurity and other aspects of poverty. This criticism – voiced by various departments of the Ministry of Agriculture, the Chitedze Agricultural Research Station, NGOs, donors and other stakeholders – was in some cases scathing and in our view largely justified at the time.

Three and a half years hence we have solicited the views of representatives from most of the same institutions. This time around, however, we have almost invariably heard praise of Bunda for apparently having transformed itself from being an inward-looking institution preoccupied with academic status to one that engages in outreach activities. This is first and foremost exemplified by ARDEP but we are not in a position to say unequivocally whether this transformation applies generally. The pendulum appears to have swung from the production of academic research articles and reports to the application of the multiple agricultural technologies that Bunda has developed over the years. As reviewers it puzzled us that such an about-turn could be possible in a relatively short period of time because institutions tend to change only slowly. What could be the reasons underlying this dramatic change of mindset on the part of Bunda? We would like to mention a few of the most likely ones:

- During phases I and II of Norwegian support to Bunda, the thrust of the programme was institution- and capacity-building activities. During those years from the late 1990s until about 2006, it was only to be expected that Bunda would be preoccupied with building and consolidating itself as a reputable university college within the academic community in Malawi and abroad. The preceding phases might be seen as necessary precursors to what is currently taking place within the context of ARDEP. In a manner of speaking, Bunda has matured as an institution as a result of the achievements under phases I and II. Although much remains to be done in respect of solidifying Bunda, not least its financial sustainability (please refer to the companion report on the BCDP), there is no doubt that this institution has acquired a new degree of self-confidence. This is reflected in the enhanced level of qualification of its academic and support staff through a large number of scholarships; increased government subventions; an improved image in society at large (partly a result of ARDEP); and its internal functionality. Based on this new-found self-confidence, Bunda has become better prepared for the long sought-after outreach and application of technologies.
- Bunda has not been immune to criticism. Persistent criticism from many quarters has gradually sunk in and led to Bunda's change of mindset and mode of operation. It has probably been acknowledged that a change was inevitable if the legitimacy of the institution within an agrarian-based economy were to be upheld. Continued insensitivity to criticism might in the longer run jeopardise government support and thus undermine the achievements made to date. In other words, Bunda appears to have realised that it was in its own interest as an institution to engage more pro-actively with the surrounding society and to make its contribution to Malawi's strategies for development, poverty reduction and food security. An improved image was long overdue.
- All over the world, academic institutions are primarily judged on their academic merits, measured principally in terms of academic publications, the quality of which being judged by international peers. This state of affairs is still largely the case. From the point of view of Bunda as an institutions and by the same token individual staff members who collectively make up the institution, there is a strong incentive for staff to produce purely academic work because this will further their careers. This often occurs at the expense of other types of related activity, such as outreach, dissemination, consultancy work, etc. In other words, there is a built-in disincentive for academic staff to engage in anything but academic pursuits. Recently, however, a new set of promotion criteria has been mooted based on a points system. Apart from research and academic publication through reputable outlets (still accounting for 40 per cent of the merits), these criteria have been expanded to incorporate teaching in a more systematic manner; outreach, dissemination, and consultancy work; attraction of external funding; and other contributions to the institution, e.g. administrative functions such as department heads and the like. It is likely that these new promotion criteria already have and will induce Bunda staff further towards outreach activities in the future.

The birth of ARDEP has had long gestation and inception periods. As a result, in terms of the original time table the programme is lagging behind schedule. This fact was brought out by the internal review of the micro projects undertaken in August 2008. In turn, it has spurred a question about the efficient use of time and funds. Could the gestation and inception periods have been compressed so as to save time and other resources?

Across the board the response to the above question was in the negative. Given the tension observed in 2005 between various stakeholders considerable time has been required to mend those relations and to create rapport and to forge workable partnerships at all levels. Attitudes and prejudices change only slowly. It should also be recalled that the number of actors involved are many and of great diversity. To capture this complexity in a functional programme design is both difficult and time-consuming. Of particular importance was the sensitisation and mobilisation of the farmers themselves as the ultimate beneficiaries. During our field visits we observed the commitment and enthusiasm, as well as the grasp of the programme's rationale, on the part of the farmers. If the long gestation and inception periods served to produce this atmosphere conducive for multi-actor collaboration, it is well worth it. This is the unison assessment of our respondents. We tend to concur.

On the other hand, if we had had time to make a more through investigation, we might have discovered that certain cost savings might have been possible. There is a penchant among Malawians for workshop participation and travel because it yields additional emoluments which are non-taxable. In view of the generally low basic salary levels there is no basis for moralising over this inclination. It is a structural problem embedded in public salary structures which cannot be resolved at the programme level. However, it may be detrimental to the programme because frequent and unnecessarily long workshops and travels tend to slow down the rate of progress and to be a budgetary burden. This is not to say that workshops, travels and related activities are superfluous. Our point is simply that more economical use of workshops and travel would probably be advisable. That said, however, we doubt that the savings could have been substantial.

Consider the alternative option: shortened gestation and inception periods. The donor community tends to be impatient (up to a point it should be) and preoccupied with the results that are expected from projects and programmes they fund. One of the principles of the Paris Declaration of 2005 is indeed managing for measurable results. But this principle must be considered in the light of two other key principles: ownership and alignment. Creating ownership by aid recipients is intended to foster commitment and ensure long-term impact. Similarly, alignment with the policies of the host government is expected to promote sustainability. Unfortunately, there is no 'quick fix' method of creating ownership or ensuring effective alignment. Applying these two principles takes time. If the processes towards achieving ownership and alignment are rushed, the envisaged results might be jeopardised. Still, many donors remain steeped in a mode of operation reminiscent of the project cycle that allegedly is a thing of the past. The current thinking is sector-wide approaches and budget support. Nonetheless, the time horizons are still normally too short. Thus, while a certain measure of impatience is warranted, it could be counter-productive if taken too far.

Nevertheless, there is a legitimate concern on the part of the MoAFS that the cost of each of the 19 pilot projects is on the high side and that a major scaling-up might, therefore, be beyond the ability of the state budget to absorb. It should be recalled, however, that the pilot projects are realistically expected to be self-sustaining after their productive capacity has been heightened with the help of initial capital, know-how and supervision from external sources. Furthermore, the anticipated scaling-up exercise does not need to be nationwide at one go. It could be incremental over a longer period of time so as to make it easier to accommodate the cost within constrained budgets.

We acknowledge that there are many legitimate interests competing for state resources. However, the team takes the view that if a predominantly agrarian country is unable to prioritise agriculture as the most critical sector of the economy for food security and the livelihood of the majority of Malawians the inevitable conclusion is that Malawi will be perpetually dependent on donor support. With respect to the Bunda College of Agriculture Capacity Building Programme the review team has mooted the idea of an endowment fund (see the companion report for a further discussion). To ease the pressure on the annual state budgets, there is a case for establishing an endowment fund for continuously supporting synergies between research and development programmes in the agricultural sector. Alternatively, such functions could be one of several purposes of the proposed fund. The government and the donor community alike could contribute to its capitalisation. It is beyond this report, however, to provide a detailed proposal for such a fund.

Findings

The interface between research and technological development, on the one hand, and outreach and application for development, food security and poverty reduction, on the other, is a complex one. These divergent types of activity tend to be compartmentalised and to meet only occasionally. Developments in the respective spheres seem to move on separate tracks. To bridge the gap between these endeavours, therefore, is very challenging. Ideally, policy-making should be evidence-based and informed by findings from research. But this is often not the case which, in turn, could lead to policy failure. Translating knowledge and insights from research into operational policy requires close dialogue and consultation between scientists and policy-makers. But the appropriate fora for such dialogue are often lacking.

Beyond the formulation of policy, the implementation process also requires continuous dialogue and liaison between the stakeholders involved at all levels to be successful. There might be a problem, though, that stakeholders pull in different direction according to their narrow interests and sometimes in defiance of evidence. Furthermore, implementation is generally compounded by a host of external factors that may jeopardise the outcome. Hence, a programme design with enough flexibility to be able to take into account unexpected occurrences is mandatory.

Mode of operation

The novelty of ARDEP is its mode of operation. First, its defining characteristic is the involvement of multiple stakeholders across sectors into a coherent system of implementation so as to ensure concerted action towards common goals. Second, the micro projects are based on demand-driven research and outreach from the ultimate beneficiaries at the grassroots: the farmers themselves, in conjunction with and on the advice of the scientists. In such a bottom-up approach extensive sensitisation and mobilisation have been necessary. Creating rapport and a spirit of collaboration among stakeholders who used to be sceptical of each other has been a time-consuming process. Third, the pilot micro projects are fully integrated into established government structures, especially those of the Ministry of Agriculture and Food Security (MoAFS). ARDEP fits squarely into the overall government policy framework for the agricultural sector: the Agricultural Development Programme (ADP). It must be underscored that ARDEP is a national programme, although managed from Bunda. This feature is especially important for the sustainability of efforts beyond the external funding period. Fourth, ARDEP is exploiting existing technologies previously developed at Bunda and the National Agricultural Research System (NARS). In the past, these technologies tended to remain without wider application but through ARDEP the missing outreach aspect has been given prominent attention. In addition, the ARDEP micro projects also incorporate

concurrent research spurred by problems that have emerged in the course of implementation. The results thereof will be fed into and reinforce the ongoing development activities.

The mechanisms employed by ARDEP towards implementation include above all a Competitive Grants Scheme. Calls are issued for project proposals, first as concept notes and subsequently submitted as fully-fledged proposals. The procedures are elaborate and the process lengthy. In the interest of quality assurance and to avoid conflict of interest issues, the use of external referees in assessing the proposals is advisable and reassuring. However, there might be some scope for making the process more efficient, e.g. by reducing the number of external referees.

From the two calls for proposals so far have emerged a series of micro projects around the country, covering all three regions and spanning many sub-sectors. The geographical pilot areas were selected on the basis of food insecurity criteria.

The projects are provided with inputs from ARDEP, i.e. improved production technologies, including seeds, fertilisers, and improved breeds of animals; initial capital, mainly for construction purposes; and advisory services from the scientists. The findings from our field visits are dealt with below.

For the purpose of documentation of activities and results, the Programmes Coordination Office (PCO) has been strengthened with a Monitoring and Evaluation (M&E) Specialist. Notwithstanding the delay in recruiting this professional officer, this addition to the PCO will no doubt go a long way towards improved documentation, which is critical for deriving lessons learned when subsequent scaling up is put on the agenda.

In terms of ARDEP's governance structure, at the apex is found the Programme Board (APB), chaired by the Principal Secretary of the Ministry of Agriculture and Food Security. It comprises representatives of key institutions relating to agriculture and research, such as the National Research Council of Malawi, Ministry of Education, the Food and Agriculture Organisation (FAO) of the United Nations, etc. The main function of the board is to determine policy.

Below the Board is the ARDEP Management Group (AMG) consisting principally of technical people. Chaired by the Director of the National Research Council of Malawi, a main function of this body is to scrutinise and assess project proposals stemming from the calls for proposals and otherwise provide technical advice in the implementation of the programme.

The daily management of ARDEP is entrusted to the PCO which has three professional officers: the Coordinator, the M&E Specialist and the Financial Controller. Support staff include a secretary, a messenger and a driver.

At the level of the micro projects the management is delegated to a team of resident government officers at the district and EPA levels and NGO personnel who liaise with and assist the farmers and their associations in the implementation of the projects. The local teams have designated leaders and are intermittently visited by scientists from Bunda or from Chitedze National Research Station or its local branches which offer guidance and advice. The bulk of the development work is carried out by the farmers and their local associations.

Overall, what appears to have emerged is a unified management and implementation structure comprising a wide range of relevant stakeholders. The review team has observed first hand that the collaborative relationships among the stakeholders – with one exception – are cordial and function well.

One caveat needs to be inserted here. Since the micro projects involve two main categories of people – scientists and development workers, including farmers – there is an inherent danger that their roles may become blurred in their interaction. Although there are, of course, grey zones between research and development, efforts should be made to delineate clearly the respective roles. Scientists should not step out of their role as conveyers and disseminators of technologies and become involved in nitty-gritty development work. It is crucial, however, that the scientists do engage continuously with the implementers and farmers so as to promote an understanding of new technologies by the beneficiaries. Once that understanding and knowledge has been imparted the scientists should leave the practical work to the other implementers and the farmers, yet under the supervision of the scientists. The review team has not had occasion to observe that these roles between scientists and implementers have in fact been obfuscated. Brief field visits only precluded that. But the ARDEP Board and Management Group and the PCO would be well advised to be alert to this danger and to ensure that the scientists do not engage in the development work that should be done by the farmers. The point we would like to make is that the scientists should not become akin to NGO staff. It will not serve the interest of the programme. Rather, in terms of the cost concerns raised earlier on it would probably be a waste of resources to use the scientists' time for development work on the ground.

The review team finds the ARDEP to be different from other programmes whose sustainability has been questionable. We have pointed to a series of elements in the design of ARDEP which contribute to sustainability, above all the good working relationship between the stakeholders, and its integration into the structures of the MoAFS. Furthermore, the time and resources spent initially in sensitising and mobilising the smallholders have created enthusiasm and commitment as indicators of ownership that is likely to enhance the sustainability prospects. It is critical for ARDEP's continued success and sustainability that all these elements be preserved and cultivated in years to come. The recently instituted M&E function would be a useful tool towards that end.

It is conceded, however, that every development programme involves risk. The enthusiasm in evidence at present may wane if the results are slow in materialising, leading to disappointment and even despondency on the part of the beneficiaries. Arguably, the greatest risk concerns the scaling up challenge. True, the cost of the pilot projects is on the high side. But with the experiences and lessons learned from the ARDEP programme its lengthy inception process may not need to be repeated in the scaling-up exercise. However, we would warn against pruning the inception process too much lest it undermine ownership. At the end of the day, there is no escaping major investment (including operation and maintenance) in agriculture, if Malawi is to graduate into a food-secure country. Scaling up a worthwhile approach such as that of ARDEP would be part of that investment.

With the above qualifications and risks, the ARDEP concept and design are definitely sound. Stakeholders across the board can attest to that. Indeed, the current structure and functionality of ARDEP is arguably its greatest achievement to date, especially in view of the point of departure with less than harmonious relations between stakeholders in the past. This is not to deflect from the substantive results achieved but due to the delays of start-up the review team has found it somewhat premature to assess the substantive results. Major results can be expected in the remainder of the programme's lifetime.

Micro projects

As of August 2008, ARDEP, through the competitive grant scheme for research and outreach, had funded a total of 19 micro-projects, 8 in 2006/07 under the first call cycle and 11 in 2007/08 under the second call. Implementation takes place in 5 impact sites of Njuyu and Emfeni EPAs in Mzimba

District, Mzuzu ADD; Manjawira EPA in Ntcheu District, Lilongwe ADD; Chingale EPA in Zomba District, Machinga ADD; and Dwale EPA in Thyolo District, Blantyre ADD. These pilot projects cover 8 thematic models:

- Aquaculture for improved rural livelihoods (Chingale, Chingale EPA);
- Livestock farming and access to market under the Model Village Approach (Emfeni and Njuyu EPAs);
- Accelerating the impact of improved vegetable production and value addition in reducing poverty amongst farmers (Dwale EPA);
- Future Farmers – strengthening farmer capacity to manage resources and improve livelihoods (Manjawira and Chingale EPAs);
- Promotion of irrigation technologies for improved livelihoods of smallholders (Njuyu EPA);
- Enhancement of cassava production, processing and utilisation (Manjawira EPA)
- Entrepreneurship in dairy farming (Dwale and Emfeni EPAs); and
- Promotion of food security through market access (Manjawira, and Emfeni EPAs).

The review team had the opportunity of visiting selected pilot projects in Chingale, Emfeni and Manjawira EPAs. A brief summary of our findings is provided.

a) Emfeni EPA: Livestock Model Village and Food Security through Market Access Centres

The main objective of the Livestock Farming, Access to Market under the Model Village Approach project is to achieve increased livestock productivity and improved livelihoods of smallholders. The objective of the Food Security through Market Access project is to model the most appropriate marketing information system which would result in increased market access by farmers.

Shadreck Mudhluli Model Village

This is one of the 6 model villages established in Emfeni EPA. Targeted farmers have already acquired skills in animal health services to existing livestock, training of livestock management, enterprise development and marketing skills. The village has received dairy cattle (a cross-breed of Zebu and Friesian cattle) from ARDEP. These will then be bred naturally while artificial insemination will extend to local cattle belonging to targeted farmers. Chicken layers have also been incorporated into the Model Village for egg production. The breeding of Saanen goats for milk is in progress while pigs will soon be part of the programme once the construction of 'kholas' currently under way is completed. Pigs will be bred and sold at weaning stage. A fully-fledged management committee has been established with a reasonable gender balance. Support in the areas of research, training, management, provision of inputs, and M&E is being provided by the MoAFS, Bunda College, IDEAA and other donors such as Flanders International Cooperation Agency (FICA) of Belgium in collaboration with FAO.

Although the entire model village programme in the area started late, considerable progress has been achieved. Collaboration between various stakeholders is very good while enthusiasm from the beneficiaries is wonderful. Production inter-linkages such as the use of animal manure for crop production and the use of crop residues is planned to create a cost-effective, viable and sustainable production model.

Challenges to date include: limited transport facilities (the only motor bike available has broken down and the AEDO is not sure when it will be repaired in the absence of a maintenance plan); inadequate record keeping; slow progress on feed production, especially soya; delayed research activities; and security (need for fencing the village).

Emfeni Marketing Centres

Emfeni EPA has market centres at Chibembe and Kanjuchi targeting about 18,000 farmer families. The project is linking up with other projects covering several commodities and has undertaken a number of activities such as promotion activities including radio programmes, brochures, videos, and market shows; dissemination of market information services such as market business plans and savings and loan schemes; and skills development in marketing of commodities.

Progress on the ground is variable. Taking Chibembe Centre as an example, this centre became operational on 22 October 2007. It has 9 committee members (5 male and 4 female). The Centre has made reasonable progress so far. It has facilitated the sale of agriculture commodities worth MWK 1,530,000; it has MWK 47,820 in the Village Savings and Loan (VSL) fund; MWK 710 as social fund; MWK 4,040 as revenue from various penalties; and MWK 2,200 from membership fees. It has also conducted several training sessions regarding the management of the village fund.

Major challenges include: limited markets for certain products; lack of office space; inadequate transport (one bicycle only); and farmers' reluctance to pay membership fees. To make the entire process more viable in the future, plans are on the drawing table to initiate the formation of cooperatives that would be responsible for the buying and selling of agricultural products.

Achievements and challenges at Kanjuchi Centre are similar to those experienced at Chibembe. Additionally, there is a general concern that the training received in the preparation of project proposals and in business management is inadequate. There is also a request for excursions to similar programmes in the country to foster the sharing of experiences and the exchange of information.

b) Manjawira EPA: Cassava, Piggery, and Marketing

There are a number of pilot projects in Manjawira EPA. The ARDEP mid-term review team was briefed by Manjawira EPA staff on each of the projects in the EPA. Field visits concentrated on three micro-projects: cassava, piggery and marketing.

Tsabwela Village Cassava Nursery Micro-Project

The Enhancement of Cassava Production, Processing and Utilisation Project intends to improve the living standards of the vulnerable people in areas such as Manjawira through enhanced cassava production, processing and utilisation through the following outputs: increased number of active farmer groups involved in cassava production; increased supply of improved cassava varieties; increased knowledge in cassava production; increased participation of women in cassava production; improved HIV and AIDS mainstreaming in cassava production; improved cassava processing, storage and utilisation; and the promotion of improved farmer marketing system and monitoring and evaluation.

At Tsabwela Village, the project is on course with the distribution of cassava seed that has been used in the establishment of cassava nurseries. Staff and farmer training has been conducted as well as field days in demonstration sites. Farmer excursions have also been undertaken to cassava growing areas such as Nkhota-kota. Major challenges encountered include the late delivery of planting materials (cuttings); livestock damage (mainly to goats); cassava seed theft in nurseries; drought; infestation by the Cassava Mosaic Virus Disease (CMVD); mobility constraints during project implementation.

As the way forward, farmers are encouraged to fence their gardens to avoid livestock damage; observe rouging to prevent further spread of the CMVD and guarding as a remedy to theft. Research is being undertaken concurrently by the Chitedze Research Station to develop new cassava varieties

more resistant to the CMVD. There is need for further research on how best goat keeping and cassava production can be integrated

Chidowora Piggery Micro-Project

The Manjawira Commercial Piggery Stud Breeding project aims at enhancing income levels and improved food security of smallholder farmers through piggery stud breeding and selling of standardised breeding stock and fattened pigs operating under a sustainable cooperative/association. This will be achieved through the establishment of commercial piggery stud breeding, strengthening of farmers and staff capacity in the management of piggery stud breeding, enhancement of farmers' and staff agri-business knowledge and skills and provision of start-up inputs. The project also aims at assessing the cost-benefit of commercial piggery stud breeding among smallholders.

The Chidowora piggery micro project has 20 members (12 women and 8 men). The project is still in its early stages of implementation with the construction of facilities, on a self-help basis, in the initial stages. The only activities to date are the sensitisation meetings and the training of members. The beneficiaries are well motivated and have indicated that they received timely assistance from the AEDO and Manjawira EPA staff in general, but were blunt to say that they have had limited commitment and support from the Ntcheu DADO. For example, certain materials have been received late or not received at all. At present, building materials for the 'khola' are inadequate.

Balaka ARDEP Market

The purpose of the project (Food Security through Market Access) is to model the most appropriate marketing information systems which would result in increased market access by farmers (in the 2 target EPAs of Emfeni and Manjawira). This project is a clear case of functional involvement of all collaborators/partners in project implementation. The project involves IDEAA and various units of the MoAFS such as the Agricultural Extension Services, and the Agricultural Communications Branch. To date, marketing tools include cell phones for receiving and disseminating market information; blackboards for displaying bids and offers; bicycles for carrying out market surveys; radios for listening to various relevant radio programmes; and heavy duty scales for weighing and standardising agricultural commodities in the marketing centres.

Balaka Market is a fully functional market. It has an enthusiastic committee with a woman chairperson. Even though it has a lower trade volume to date – MWK 762,000 compared to Kanjuchi (MWK 1,834,900) and Emfeni (MWK 1,530,000), business is growing rapidly as more people are becoming aware of what services it provides. There is a general feeling that implementation of the entire project is progressing well. It is currently planned to model the most appropriate marketing information systems which would result into increased market access by farmers in the targeted areas.

Though the Project Management feels the project is on course to achieving its objectives, beneficiaries highlight some constraints that require urgent attention: the costly use of rented office space considered less cost-effective than use of 'own' facilities; limited storage space for various assets; inadequate transport facilities; inadequate training of members/beneficiaries in business management.

c) Chingale EPA: Aquaculture

This micro project caters for 3,000 people (500 farmers x 6 persons per household in the project area) comprising men, women and children, including women-headed and HIV and AIDS-affected households whose food security, household incomes and livelihoods are vulnerable. So far, the project has established a fish breeding nucleus and identified and trained 7 seed multiplication farmers and 15 fish growers. Fingerings have been and are being produced for various purposes

including for dietary experiments and growth out. Locally available feed ingredients from Chingale were collected and analysed. Staff and farmer training, as well as study tours, have been undertaken.

Commendable progress has been made owing mainly to good team work despite some management shortfalls. Enthusiasm on the part of the beneficiaries is quite high and this augurs well for long-run sustainability. The project has benefited from the use of the existing Fish Farmers' Association that has a team of experienced farmers to identify beneficiaries.

The project is confronted by a number of challenges such as its reliance on World Vision for implementation on the ground; some project activities are behind schedule such as feed production and the construction of ponds; and the collaborators in the project have other commitments which could pose a challenge for the project's effective implementation and sustainability.

d) Analysis

Although the preliminary results are very encouraging it is too early to make definitive judgements about output levels. It is particularly difficult to assess the long-term impact of the pilot micro projects around the country through scaling up the programme. They are all less than a year old. This notwithstanding, there is a positive indication at the project goal level. ARDEP has produced a powerful, effective, and efficient national research and outreach system for the agricultural and natural resources sectors. The principle of having in place a competitive grant scheme is generally working well through multi-sectoral and multi-institutional representation at various levels from management to implementation. Based on the achievements to date, these pilot projects if well replicated and adapted elsewhere and efficiently implemented may help to achieve the objective of promoting food security and income generation at the macro level. They are also likely to help in strategising for climate change mitigation and adaptation. Through their ongoing training and public awareness activities, these pilot projects are also contributing to the mitigation of the impacts of HIV and AIDS and to addressing the existing gender imbalance through the increasing participation by women. Due to the direct or indirect participation of other donors, especially through NGOs, it is anticipated that there will be a broadening of sources of funding for more programmes. The review team received information that the MoAFS is actively pursuing the inclusion of ARDEP as an item in the national budget. This would enhance the sustainability of the programme and augur well for scaling up to other parts of the country.

On the negative side, the pilot projects are being developed and implemented without clear environmental and climate change impact guidelines. Lastly, the implementation of the pilot projects is behind schedule due to a number of factors, especially the lengthy ARDEP inception phase. This may have an adverse effect in that planned activities may not be accomplished during the 5-year project timeframe.

Conclusion

Judging from the above case studies and the available documentation, ARDEP has made a very good start with promising prospects if potential risks are managed and mitigated in a timely manner. At the core of the success potential are the enthusiasm and the sense of ownership shown by the beneficiaries at the grassroots level. Timely delivery of inputs, supervision, and frequent M&E are key ingredients to allow the enthusiasm and ownership to come to fruition. Lack of accountability and/or corruption are risk factors that may jeopardise achieved and envisaged success. The story of the Ntcheu DADO is well known but remedial action now appears to have been taken to solve the problem.

A preliminary examination of various assets associated with the projects such as buildings, office and field equipment, vehicles and other infrastructure show that there is no asset maintenance plan. Maintenance is done on an *ad hoc* basis on the premise that this is only possible as and when

resources permit. A maintenance plan would assist in deciding on the most cost-effective manner assets should be maintained or boarded off.

According to the Agricultural Development Programme (ADP), there is a significant risk of both drought and flooding in the country which could have detrimental effects on ARDEP at the household level and on the national economy. Minimising the risk of climate change and strengthening environmental protection to reduce the risk of erosion and flooding should have been clearly articulated in the programme document. The positive part of the project, using the Malawi National Adaptation Programme of Action (NAPA) criteria, is that almost all the ARDEP micro projects fit into the climate change impact adaptation strategy, especially when dealing with food security and sustainable development at the household level. But they are susceptible to disruption or destruction from environmental catastrophes such as erosion and flooding.

Scope for scaling up

The idea of micro projects on a pilot basis in different localities around the country is that the experiences gained from them should be used in scaling up operations in order to create ripple effects on a broader scale. A precondition for this ambition to be realised is that all projects document carefully what is being done and what the outputs are. For the scientists the existing technologies have presumably been documented in reports and articles already. It is the wider application under various conditions of these technologies that need to be documented within the framework of ARDEP. How do these technologies function at the farm level? What are the constraints that the farmers face when applying them? Are adjustments necessary to achieve higher adoption rates? These and a host of related questions are relevant. It is the responsibility of the scientists to collect such applied research data and to analyse them in consultation with the farmers.

Apart from scientific documentation, the programme also needs to document all other activities in order to measure performance and results. Towards that end the M&E specialist has developed, in conjunction with the project teams, a Performance Indicator Tracking Table. This is a good start but the teams, right down to the farmers, probably need training in the use of this table to enable them to fill in the blank cells on indicators. The importance of this cannot be overstated.

Scaling up and sustainability are closely linked. On the face of it, the very concept of ARDEP is well suited to underpin the sustainability of the programme beyond the existing pilot projects. At these early stages the different projects have been and are provided with technologies in various forms. Some of the technology is embodied in seed of improved crop varieties and new cross-breeds of livestock and fish species that will enhance productivity. Coupled with the provision of such tangible inputs the technological packages also include guidance and services about cultivation practices, the rearing of livestock and fish farming. Other initial inputs include fertilisers and feeds.

Since access to capital is a major hurdle for small-scale farmers, the provision of some working capital at the projects' inception is intended to enable the farmers to move ahead from investment through cultivation and good husbandry to harvesting. Their own input is labour. The farmers are trained and encouraged to procure local materials such as sand, bricks and forestry products for construction, and to produce organic inputs such as manure and soy beans for feed, and to exploit residues from crop production such as maize stalks for cattle fodder. The underlying rationale is that ultimately the projects will be self-sustaining and yield profits for the farmers, some of which going into savings schemes. When reaching that stage the dependence on external inputs will be negligible and possible to obtain by drawing on savings for further investment and possible expansion.

Given the challenges of ARDEP's financial sustainability, there is a case for continued donor support. Putting the agricultural sector on along-term recovery path towards food security is a

project that requires not only government priority but also complementary donor funding. Withdrawing or exiting too early might have devastating effects.

A critical success dimension of the projects is the linkage to markets for produce and animal products. The marketing dimension has often been neglected in agricultural projects which have tended to stop short at the production stage. But if the farmers do not find outlets for their surplus produce, they will remain in a subsistence economy without much cash income. However, in ARDEP marketing has been given a prominent place. At this stage the marketing activities through commodity information exchanges is limited in volume. Scaling up the marketing function in its present form is feasible but linkage to larger players in the private sector is probably worth looking into more closely.

In addition to the sustainability of the projects themselves as discrete entities, the potential for scaling up is greatly enhanced by the way in which ARDEP is integrated into the established structures of the agricultural sector. The review team has learned that agriculture in recent years have been accorded higher priority by the central government, reflected in an increasing budgetary allocation to this sector. This is unsurprising given the centrality of agriculture in the Malawian economy and not least in the livelihoods of the overwhelming majority of the country's 13 million inhabitants. Agriculture is the mainstay of the economy and deserves increasing attention if poverty reduction and food security is to be achieved.

ARDEP fits very well into the overall policy framework for the agricultural sector – the Agricultural Development Programme (ADP) – and conforms to its precepts. At the district and Extension Planning Areas (EPAs) the ARDEP concept has been operationalised to form a suitable vehicle for implementation, not only during the programme's life cycle but also when external funding inevitably ceases. A model of technological outreach has been arrived at. It promises to be sustainable because the government is heavily involved as a key player. If, as a result, the government is also prepared to put money into this workable model elsewhere in the country the potential for large-scale impact is considerable.

For the donor community the ADP constitutes a sector-wide approach (SWAP) and accords well with the current aid architecture. Thus, complementary to government investment in agriculture the ADP affords the donors an opportunity to put money into a basket that will contribute to accelerating agricultural growth, promoting food security and reducing poverty. As a donor Norway should engage in discussions with the Malawi government on ways and means of securing the sustainability of ARDEP beyond the current funding phase and after a proper evaluation has been undertaken at phase-end.

Conclusion

This mid-term review has brought to the fore two very encouraging achievements of ARDEP:

The first one is the transformation of collaborative relationships between key actors in the agricultural sector in a relatively short period of time. This achievement is all the more impressive in view of the somewhat sour relationships that existed previously between many of these players. A workable model has been found for translating existing technologies (coupled with concurrent research) into viable agricultural production. This model is a promising vehicle for achieving substantive results in terms of enhanced agricultural productivity and increased production.

The second major achievement is only vaguely discernible at this mid-term stage because the micro project activities are still in the early stages. It is therefore premature to pass a definitive judgment

regarding production and productivity. Notwithstanding the delays, the review team has observed that the model is indeed working at the grassroots. The commitment and enthusiasm of the actors involved augur well for substantial progress in next agricultural cycle and beyond measured by the established indicators. A very good start has been made, with very promising future prospects.

Relevance

Relevance is very high in terms of the ADP, poverty reduction and food security. With regard to climate change all micro projects are implicitly addressing climate change as adaptations. But they address climate change mitigation to a lesser extent. It is important, therefore, that the environmental, natural resource management and climate change aspects of ARDEP be made more explicit and highlighted in activities.

Effectiveness

Owing to the implementation delays thus far it is somewhat premature to state categorically whether the stated programme goals have been achieved. Work is in progress and it is the review team's considered opinion that the majority of the objectives will be reached, though perhaps not by the end of the existing programme period in 2010.

Efficiency

As stated in the preamble above, the efficiency of ARDEP is difficult to judge. An evidence-based quantitative assessment of efficiency has not been feasible. In the circumstances, the best we can do is to give our qualitative assessment of the efficiency of the conceptualisation, design and inception phases of the programme. Aware that it has been argued in some circles that these phases could have been shortened and with less expenditure of funds, we have been persuaded by an overwhelming majority of the respondents that, by and large, these processes – however protracted and costly – have been necessary. It is not unreasonable to argue that the major achievement of ARDEP to date – i.e. the model for translating technologies into agricultural development – was made possible through this expenditure. We take the view that the expected outcomes from the micro projects and their potential for scaling up will prove the time and money well spent.

Impact

It is infeasible to make a credible assessment of the long-term impact of ARDEP at this early stage. A proper assessment of durable impact would require a panel study or a longitudinal investigation of developments during a certain time span against a baseline at the start of the programme. Moreover, we find it inappropriate to include long-term impact as part of a mid-term review. However, we find the potential impact to be substantial if scaled up within the ADP as overall policy framework for the agricultural sector.

Sustainability

Given the integration of ARDEP within the overall policy framework of the ADP; its integration into the established structures of the agricultural sector; the bottom-up, demand-driven model adopted; and the observed ownership at the grassroots, we consider the sustainability prospects to be very good.

Risks

Any programme carries risk. The 2009 general elections may result in a new government pursuing a different set of policies and priorities. An example is the fertiliser and seed subsidy programme. Second, the micro-projects may lose momentum if problems arise and cause delay and despondency unless such problems are dealt with expeditiously and not allowed to drag on. Third, the incomplete decentralisation process is also a potential risk, for example leading to tension over resources by MPs controlling Constituency Development Funds and the District Assemblies that are currently starved of resources. Fourth, there is lack of experience in Malawi with privatised extension

services which are being contemplated by the government. This represents a risk if modalities are not found between public and private extension services. Fifth, high staff turnover at all levels of ARDEP poses risk to the programme in terms of continuity and sustainability. The same applies to frequent changes of the composition of the ARDEP Board and Management Group. Sixth, the HIV and AIDS pandemic is a continuous threat to the programmes progress to the extent staff and beneficiaries are affected.

Recommendations

1. It is recommended that the ARDEP programme be extended beyond 2010 in view of the delays that were justified in terms of the need to forge new collaborative relationships and to design a model for translating research and technologies into action for the benefit of the farmers.
2. It is recommended that the documentation of activities and achievements be improved by more systematic use of the Performance Indicator Tracking Table under the auspices of the M&E specialist. Training in the use of the table by the implementers at the grassroots is no doubt needed.
3. The grassroots orientation of the programme must be retained with a view to ensuring that the benefits accrue to the farmers.
4. It is recommended that problems be addressed swiftly as and when they arise to forestall delays and damage to projects (ref. Ntcheu DADO case).
5. The programme must produce an asset maintenance plan that covers office equipment, vehicles, buildings, and infrastructure at all levels of the programme.
6. The extension service inadequacies at the EPA level must be addressed in conjunction with the Ministry of Agriculture and Food Security.
7. It is recommended that the environmental aspects of the programme be highlighted with a view to taking fully on board their repercussions, especially with regard to climate change. This should be done in the form of a strategy in line with the ADP and NAPA for the management of environmental challenges and climate change at the micro project level.

Annex 1: People Met

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Nthala, E. (Mrs), Treasurer, Chidowora Piggery Project
(8 additional farmers were consulted)

2. Kachere Cassava Nursery Group

Limbanga, L., Chairperson,
Nkhudzi, M., Treasurer,
Mtuwa, M., Secretary, Kachere
(20 additional farmers were consulted)

3. Balaka Market ARDEP Market Centre

Phanga, Lucky, Chairperson,
Nkwanda Alexander, Vice Chairperson
Damiano Letiness, Secretary
Chimwala Chrissy, Vice Secretary
Mbilima, Masiye, Treasurer
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Annex 2: Terms of Reference

Mid-Term Review of Bunda College of Agriculture Capacity Building and Agriculture Research and Development Programmes (Malawi)

1.0 Short description of the programmes to be reviewed

Norway's partnership with Bunda College of Agriculture started in 1998 when Norway provided support to the college to improve its performance in technical and institutional planning and in research, education, training and outreach. Through this support Bunda College in 2000 developed a five-year operational plan to guide its future development programme. Pursuant to this strategic plan, Bunda College developed and submitted to Norway a programme document titled Malawi Agricultural Research and Outreach Programme which was later renamed Poverty Reduction in Malawi using agricultural research and outreach (PRIMARO). The primary goal of the programme was to *improve the performance of BCA in learning, teaching, research and outreach to enable the College to play a significant role in the development of the country and to attract other sources of funding for its development programme.*

Core activities of the PRIMARO programme were grouped into three broad components: on-farm/on-station research; outreach; and capacity building. It was envisaged that the programme would strengthen linkages between farmers, and the research and extension services in Malawi. By playing a leading role in changing the ways in which researchers and other national agricultural support services reach their beneficiaries, it was envisaged that Bunda College would be contributing substantially to bridging the gap between researchers and farmers. An evaluation of the programme by Norad recommended, however, that the programme be split into two separate components: Bunda College Capacity Building Programme and Agricultural Research and Development Programme.

a) Bunda College Capacity Building Programme

BC Capacity Building Programme aims to enhance the performance of BC as a lead institution in relevant and efficient learning, teaching, research and outreach for the agricultural and natural resources sector of Malawi and to enable the College play a significant role in the development of the country. The programme is currently being implemented with the following specific objectives:

- To strengthen a relevant and comprehensive human resources development and training programme for the nation by increasing the number of research scientists with postgraduate training at the level of PhD and MSc with substantial and practical research methodology appropriate to farmer-oriented and demand-driven action research;
- To improve teaching, learning, as well as administrative and financial management;

- To improve priority teaching and research facilities and provide additional enhancement of the facilities at the College required for supporting this necessary and desirable ambition so that the College can effectively contribute to the research and outreach system;
- To strengthen collaboration/cooperation and linkages with partner institutions;
- To support the organisational restructuring/reform process of BC;
- To support the Programmes Coordinating Office (PCO) for efficient and smooth implementation of programme activities.

b) Agricultural Research and Development Programme (ARDEP)

ARDEP was designed to help the nation to move swiftly and effectively into a new research and outreach paradigm. ARDEP puts emphasis on demand-driven research and outreach, and that any research findings generated from this programme must be brought out to the ultimate beneficiaries: the farmers. The overall goal of ARDEP is to reduce poverty and vulnerability amongst the poorest groups and improve the quality of life and social well-being of Malawians through a powerful, effective, and efficient national research and outreach system for the agricultural sector of Malawi.

The immediate objectives (purposes) of ARDEP are as follows:

- To promote food security and income generation of small-scale farmers;
- To facilitate more women participation in the economic, agricultural and natural resources development of the country;
- To contribute to mitigation of the impacts of HIV/AIDS; and,
- To broaden the sources of funding for its development programme.

ARDEP is being implemented through two major components:

i) Developing and implementing a farmer-focused Agricultural Research and Outreach Funding Mechanism

A competitive research and outreach (development) fund open to applicants has been established. The fund, while managed in financial terms by Bunda College, is administered by an independent committee. The Programme attempts to merge a competitive academic model with an applied research model that involves participatory project formulation. The applied objective is linked to the outreach component and both address the Programme's main objective of poverty reduction.

ii) Facilitating and promoting uptake of ready demand-driven technologies and implementing outreach activities.

The aim of the component is to identify and disseminate existing technologies with the ultimate goal of reducing poverty in the selected sites in particular and in the whole country in general. In addition, this component also aims at encouraging various extension service institutions to provide extension services on a competitive basis in accordance with the new national policy in agricultural extension in Malawi.

1.2 Team composition and leadership

The review will be undertaken by a team of two consultants comprising a Norwegian and a Malawian. The Norwegian consultant will be hired by Norad whilst the Embassy in Lilongwe

will be responsible for the local consultant. The Norwegian consultant shall act as the team leader.

2.0 Purpose, context and intended use

The purpose of this assessment is to provide an objective review of both ARDEP and BCBP, their implementation and implementation arrangements in relation to the programme goal, objectives and expected outputs. Additionally, based on the results and existing strategies and programmes, the review shall provide the Norwegian Embassy with important information, guidance and analyses focusing on challenges and opportunities for ARDEP to contribute to the implementing the Agricultural Development Programme (ADP) and climate change issues in Malawi. Overall, the review team shall:

- provide an impartial and independent assessment of the performance of the programmes in relation to the stated goal, objectives and outputs;
- assess the achieved results of the programmes and their relevance in the context of improving food security and climate change in Malawi;
- assess and recommend possible opportunities for improving the implementation of ARDEP and the BC Capacity Building programme.

3.0 Scope of work

In the assessment of the overall performance of the programme in relation to the goal, objectives and expected outputs, the Team should review the role of the different stakeholders.

The review shall also assess the institutional arrangements put in place for planning, management and implementation of the programme. The review team shall especially focus on the efficiency and capacity of the institution designated to co-ordinate the implementation of the Norwegian contribution, especially focusing on:

- the effectiveness of the BCA in the implementation of the programme and the linkages with its partners and collaboration with other institutions;
- the assessment of constraints faced and measures taken to address these constraints during the implementation of the programme;
- the success of the efforts to restructure the management of BCA by delegating responsibility to department heads, and for the efficient management of non-academic functions;
- the performance and management of programme support, including reporting and financial management;
- the assessment of the level of commitment and participation of both the internal management team and collaborating partners in implementation process, including planning and monitoring of programme activities;
- the assessment of the level of programme dissemination.

In relation to the major components of both ARDEP and BCDP, the Team is required to assess the level at which the outputs were achieved (using the indicators as the basis for the evaluation). In relation to the ADP and the Climate Change Framework, the Team shall also assess the relevance of the ongoing programme activities and propose possible amendments in the course of action to align the programme to the priorities described in the ADP and Climate Change Framework.

The assessment of the two programmes shall be guided by some of the following review criteria and proposed questions:

Relevance – assess the extent to which the intervention conforms to Malawi’s existing policies, strategies and programmes.

- a) Is the intervention consistent with food security and climate change strategies, policies and programmes?
- b) Is the intervention well in tune with the development policy, especially the Malawi Growth and Development Strategy 2006–2011?
- c) Do the innovations and intervention have potential for replication nationwide?

Effectiveness – Using the established set of indicators the review team shall assess the extent to which the programme has achieved its goals and objectives.

- a) Assess to what extent the programme has contributed to improved food security and capacity in Malawi,
- b) To what extent are the identified outcomes the result of the programmes rather than external factors?
- c) What are the reasons for the achievement or non-achievement of outputs or outcomes?
- d) Was the established monitoring and evaluation system effective in directing implementation of the programme components?
- e) What could be done to make the programmes more effective?

Efficiency – The review team shall provide an objective assessment of the efficiency of output delivery, including assessment of expenditures in relation to activities carried out.

- a) Has the programme been managed with reasonable regard for efficiency?
- b) What measures have been taken during the planning and implementation phase to ensure that resources are efficiently used?
- c) To what extent have the programme activities delivered as agreed?

Impact – The evaluation team shall assess the different types of impact of the programme, positive and negative, intended and unintended.

- a) Has the programme motivated or improved community and gender participation in agricultural research in Malawi?
- b) What do the beneficiaries and other stakeholders perceive to be the impact of the programme?
- c) To what extent does the programme contribute to capacity development and the strengthening of participating institutions?

Sustainability – The team shall assess the effectiveness of sustainability measures established during the programme implementation.

- a) To what extent has measures been taken to address the sustainability of the programme activities?
- b) Is there local ownership of the activities at all levels, institutional and local?
- c) Is the approach used for grant management and capacity development appropriate for Malawi?

Assessment of risks management – Effective implementation depends on how well Bunda College manages risks and how well programme sustainability is integrated into the design. In this regard, the study shall revise the proposed sustainability and risk elements especially those associated with the following: policy and framework conditions (incl. corruption);

socio-cultural and gender issues (incl. HIV/aids); economic and financial matters; institutional and organisational factors, and the environment.

4.0 Implementation of the review

4.1 Sources of information and methodology to be employed

The consultant will review background information available at Bunda College of Agriculture, the Ministry of Agriculture, the Norwegian University of Life Sciences, Norad, and the Royal Norwegian Embassy, Lilongwe and other relevant institutions. Available background information includes programme documents, previous review reports, agricultural policies and strategies, minutes of annual meetings and annual progress reports, and guidelines for research.

Implementation of the proposed mid-term review will be a collaborative effort. The consultants will therefore seek the opinion and views of the widest possible spectrum of key stakeholders, some of which include: the of Principal of BC, programme coordinators and staff of Bunda College, Principal Secretaries, Directors, Heads of Departments of relevant government departments and organisations, international NGOs, beneficiaries of ARDEP research grants, etc.

4.2 Timetable for the preparation, field work and finalisation of report

The review will be undertaken from 27 October to 14 November 2008. The review shall be conducted within a period of 20 working days (approximately 2 days planning, 12 days field work, 2 days for travel and 4 days report writing) for each of the consultants. During this period a field visit to Malawi will be undertaken for consultations with key stakeholders.

4.3 Input and budget

Norad will cover consultancy expenses related to the Norwegian consultant whilst the Embassy will cover all costs in connection with the Malawian consultant.

5.0 Reporting

The Team shall submit a first draft of the report not later than one week after completion of the field work (i.e. medio November 2008) and a draft final report three weeks after the study (i.e. 5 December 2008). Additionally, the team will be required to make a PowerPoint presentation of the preliminary findings and recommendations for all relevant stakeholders at the end of the field work (i.e. on 7 or 8 November 2008) with a view to soliciting feedback. The team leader will be responsible for the finalisation of the report, which will be submitted to Norad by end December 2008. The report will be prepared using the following tentative structure:

- Executive Summary: Summary of the evaluation, with particular emphasis on main findings, conclusions, lessons learned and recommendations;
- Introduction: Presentation of the evaluation purpose, questions and methods used to gather required information;

- Findings: Factual evidence, data and observations relevant to the specific questions;
- Lessons learned: Discussion of issues that are likely to have a potential for wider application and use;
- Recommendations and conclusions: Assessment of the interventions and its results against given review criteria and proposed questions, including actionable proposals to the evaluation users.

SUMMARY

This report presents the findings of a mid-term review of the Agricultural Research and Development Programme (ARDEP) based at Bunda College of Agriculture in Malawi. The objective of ARDEP is to apply new technologies to the challenges facing Malawian smallholders. The novelty of the programme is its mode of operation. It involves multiple stakeholders across sectors into a coherent system of implementation to ensure concerted action towards common goals. Demand-driven micro projects are designed to bring productivity-enhancing technologies out to the ultimate beneficiaries at the grassroots: the farmers themselves, in conjunction with and on the advice of scientists. These pilot micro projects are fully integrated into established government structures, and fit squarely into the overall government policy framework for the agricultural sector. The ARDEP concept and design are sound. Major results can be expected in the remainder of the programme's lifetime. The sustainability of the micro projects themselves as discrete entities is reassuring, and the potential for scaling up is greatly enhanced through their integration into the established structures of the agricultural sector. A model of technological outreach has been arrived at, which promises to be sustainable because the government is involved as a key player.

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