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PROJECT PERFORMANCE ASSESSMENT REPORT
ZAMBIA
AGRICULTURAL SECTOR INVESTMENT PROGRAM
(CREDIT 2698-ZA)

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*Sector and Thematic Evaluation Group
Operations Evaluation Department*

Currency Equivalents (annual averages)

Currency Name: Zambia kwacha Currency Unit:

1994	US\$1.00 = K669	1998	US\$1.00 = K1862
1995	US\$1.00 = K864	1999	US\$1.00 = K2388
1996	US\$1.00 = K1207	2000	US\$1.00 = K3110
1997	US\$1.00 = K1314	2001	US\$1.00 = K3610

Abbreviations and Acronyms

AFDB	African Development Bank	JICA	Japan International Cooperation Agency
ASIP	Agricultural Sector Investment Program	M&E	Monitoring and Evaluation
CF	Conservation Farming	MAC	Ministry of Agriculture and Cooperatives
CF	Conservation Farming	MAFF	Ministry of Agriculture, Food and Fisheries
DAC	District Agricultural Committee	NABARD	Nongovernmental Organization
DACO	District Agriculture Officers	NGOs	Norwegian Agency for Development
DO		NORAD	Norwegian Agency for Development
ES	Evaluation Summary	OED	Operations Evaluation Department
EU	European Union	PPAR	Project Performance Assessment Report
FINNIDA	Finnish International Development Agency	PSR	
FMU	Financial Management Unit	QAG	Quality Assurance Group
GART	Golden Valley Agricultural Research Trust	R&D	
GDP	Gross Domestic Product	RIF	Rural Investment Fund
GRZ	Government of the Republic of Zambia	SIDA	Swedish International Development Agency
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH	T&V	Training & Visit
HQ	headquarters	UNDP	United Nations Development Agency
ICR	Implementation Completion Report	USAID	U.S. Agency for International Development
IDA	International Development Association	ZAREP	Zambia Agricultural Research and Extension Project
IFAD	International Fund for Agricultural Development		
ISNAR	International Service for National Agricultural Research		
ISNAR	International Service for National Agricultural Research		

Fiscal Year

Government: January 1 to December 31

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OED Mission: Enhancing development effectiveness through excellence and independence in evaluation.

About this Report

The Operations Evaluation Department assesses the programs and activities of the World Bank for two purposes: first, to ensure the integrity of the Bank's self-evaluation process and to verify that the Bank's work is producing the expected results, and second, to help develop improved directions, policies, and procedures through the dissemination of lessons drawn from experience. As part of this work, OED annually assesses about 25 percent of the Bank's lending operations. In selecting operations for assessment, preference is given to those that are innovative, large, or complex; those that are relevant to upcoming studies or country evaluations; those for which Executive Directors or Bank management have requested assessments; and those that are likely to generate important lessons. The projects, topics, and analytical approaches selected for assessment support larger evaluation studies.

A Project Performance Assessment Report (PPAR) is based on a review of the Implementation Completion Report (a self-evaluation by the responsible Bank department) and fieldwork conducted by OED. To prepare PPARs, OED staff examine project files and other documents, interview operational staff, and in most cases visit the borrowing country for onsite discussions with project staff and beneficiaries. The PPAR thereby seeks to validate and augment the information provided in the ICR, as well as examine issues of special interest to broader OED studies.

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are attached to the document that is sent to the Bank's Board of Executive Directors. After an assessment report has been sent to the Board, it is disclosed to the public.

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The time-tested evaluation methods used by OED are suited to the broad range of the World Bank's work. The methods offer both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. OED evaluators all apply the same basic method to arrive at their project ratings. Following is the definition and rating scale used for each evaluation criterion (more information is available on the OED website: <http://worldbank.org/oed/eta-mainpage.html>).

Relevance of Objectives: The extent to which the project's objectives are consistent with the country's current development priorities and with current Bank country and sectoral assistance strategies and corporate goals (expressed in Poverty Reduction Strategy Papers, Country Assistance Strategies, Sector Strategy Papers, Operational Policies). *Possible ratings:* High, Substantial, Modest, Negligible.

Efficacy: The extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance. *Possible ratings:* High, Substantial, Modest, Negligible.

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible. This rating is not generally applied to adjustment operations.

Sustainability: The resilience to risk of net benefits flows over time. *Possible ratings:* Highly Likely, Likely, Unlikely, Highly Unlikely, Not Evaluable.

Institutional Development Impact: The extent to which a project improves the ability of a country or region to make more efficient, equitable and sustainable use of its human, financial, and natural resources through: (a) better definition, stability, transparency, enforceability, and predictability of institutional arrangements and/or (b) better alignment of the mission and capacity of an organization with its mandate, which derives from these institutional arrangements. Institutional Development Impact includes both intended and unintended effects of a project. *Possible ratings:* High, Substantial, Modest, Negligible.

Outcome: The extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently. *Possible ratings:* Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project). *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, towards the achievement of development objectives and sustainability. *Possible ratings:* Highly Satisfactory, Satisfactory, Unsatisfactory, Highly Unsatisfactory.

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<p>This report was prepared by Ridley Nelson, who assessed the project in February 2003. The report was edited by William Hurlbut, and Helen Phillip provided administrative support.</p>

Principal Ratings

	<i>ICR</i>	<i>ES</i>	<i>Audit</i>
Outcome	Unsatisfactory	Unsatisfactory	Unsatisfactory
Institutional Development Impact	Modest	Modest	Modest
Sustainability	Likely	Unlikely	Unlikely
Borrower Performance	Satisfactory	Unsatisfactory	Unsatisfactory
Bank Performance	Satisfactory	Highly Unsatisfactory	Unsatisfactory

* The Implementation Completion Report (ICR) is a self-evaluation by the responsible operational division of the Bank. The Evaluation Summary (ES) is an intermediate OED product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

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Preface

This is a Project Performance Assessment Report (PPAR) for the Zambia Agricultural Sector Investment Program (Cr. 2698 -) for which a credit in the amount of SDR 41.2 million (US\$60 million equivalent) was approved on January 25, 1994. The project closed on December 31, 2001, two years behind schedule. The final total disbursed was US\$53.6 million equivalent. There was cofinancing by GTZ, EU, AFDB, IFAD, NORAD, FINNIDA, Dutch Aid, UNDP, JICA, SIDA, Belgium, and USAID. An Implementation Completion Report (ICR) was submitted on June 30, 2002 (Report no. 24444).

The PPAR was prepared by the Operations Evaluation Department (OED) based on the Implementation Completion Report, the Staff Appraisal Report, the Development Credit Agreement, and review of Bank files. The project was discussed with Bank staff, beneficiaries, government staff at the central and district levels, donors, and NGOs. The mission was in the field for ten days and undertook field visits to Central and Western Provinces. No formal surveys were undertaken but farmers, extension staff, other District staff, in particular District Agriculture Officers (DACOs) and NGOs were interviewed in the field. Farmers were almost entirely interviewed on an individual basis, both women and men. The mission was free to select and talk to any households it chose. The cooperation and assistance of all stakeholders and government officials is gratefully acknowledged, as is the support of the staff of the World Bank Country Office in Zambia.

The ICR is generally clear, informative, and well presented, although it leaves room for further drawing of lessons. The main rationale for selecting this project for a performance assessment was, first, to evaluate a project in Africa associated with a broad program of deregulation with a view to better understanding the types of issues encountered; second, to assess a sector investment program as a particular category of lending embarked on in Africa in the mid-1990s; and, third, as a possible candidate for taking further at a later date, data permitting, through a broader Impact Study. Following standard OED procedures, the draft PPAR was sent to the borrower for comments before being finalized. No comments were received.

Summary

The impacts of sector-wide programs remain an under-evaluated part of the World Bank's portfolio. The attached Project Performance Assessment of the Zambia experience offers some important lessons about the minimum requirements necessary to reduce the risks associated with these programs, manage institutional reforms, and achieve the desired outcomes.

A credit of SDR 41.2 million (US\$60 million equivalent) was approved for the Zambia Agricultural Sector Investment Program on March 30, 1995. The project closed on December 31, 2001, two years behind schedule. The final total disbursed was US\$53.6 million equivalent to 89% of the original amount. GTZ, EU, AFDB, IFAD, NORAD, FINNIDA, Dutch Aid, UNDP, JICA, SIDA, Belgium, and USAID were originally to cofinance the project.

The main original *objectives* of the project, as reflected in the government's agricultural development objectives, were: to improve household food security; to promote better use of natural resources; to generate employment and raise incomes; and to increase export earnings. It was to cover the country's entire agricultural sector. It was to be implemented within the institutional framework of the Ministry of Agriculture, Food and Fisheries (MAFF). Donors procedures for procurement, reporting, accounting, and auditing were to be harmonized as far as possible. The design was to allow for annual reviews and adjustments. The project was embedded in the ongoing public sector reforms in the sector aimed at increasing decentralization. It was to be the first in a series of four-year programs.

There were four original main *components* in which many donors were involved: (i) policy and institutional improvements in marketing, trade and pricing, food security, and land use and land tenure and institutional restructuring and strengthening to improve services; (ii) public investments in agriculture research, agricultural extension, livestock production and livestock health, fisheries development, rehabilitation of small-scale irrigation, agricultural training, and support for farm power and mechanization; (iii) private sector development to create an enabling environment for the private sector including financial services for productive agricultural activities, seed multiplication and distribution, seeds and planting material for smallholders, and new public development; (iv) pilot investment schemes, including a Rural Investment Fund for small-scale capital investments in rural communities and privatization of government farms, and support for the introduction of new technologies.

The large number of cofinanciers did not feel much ownership of the program. To varying degrees they pulled out, or distanced themselves, over the first two to three years although, in most cases, continuing to fund components separately. OED rates outcome unsatisfactory, sustainability unlikely and institutional development modest, Bank performance is rated as unsatisfactory as is Borrower performance.

The project is rated against its original objectives, which were not achieved. The original project design failed to deliver and it is on this that the project is rated. The restructuring and decentralization of the central ministry took much longer than anticipated. Many donors became disillusioned particularly since a number had argued for completing the restructuring before the ASIP. The concept of the ASIP as an umbrella to unify 180 separate donor-funded projects, was not sufficiently owned by the donors and was something of a mirage in the absence of a common donor

funding pot, which had never been a realistic possibility. The Bank belatedly, after three years, at the midterm review, narrowed the concept to support a limited number of specific investments.

Even the restructured (scaled-down) project does not appear to have achieved most of the revised objectives. With respect to restructuring the ministry, this had some initial benefits through decentralization but modest impact on the efficiency of the HQ. With respect to research, ASIP funds were used for a number of specific research programs of some value and for setting up the Golden Valley Agricultural Research Trust (GART), but most of this does not seem to have increased the flow or quality of technology much. The number of released new varieties appears to have been declining. Extension did shift direction from the top-down training & visit (T&V) system to a more promising participatory group-based approach, but, with operating fund problems, it is questionable in practice how much real impact this has had.

With respect to sector reforms, where there is largely limited and indirect attribution to the project or to the associated program dialogue, implementation performance has been mixed and unstable. Fertilizer subsidies were removed but have been revived. A proposed new Crop Marketing Authority will aim to attempt to stabilize prices through the purchase and sale of coarse grains without impacting on private sector marketing.

The lessons: *First*, the minimum requirements to reduce risk in sector-wide programs to an acceptable level are: realism of expectations; a strong lead agency with, at most, modest reform needs; clear characterization of the donor harmonization sought; a sector where the timing is right; and a depth and breadth of government ownership sufficient for the scale of the task. *Second*, projecting the detailed steps and phasing for policy and institutional reform, including probabilities of delay, is at least as important and feasible as it is for traditional investment projects. *Third*, defining what is a realistic outcome within an immediate project time frame is at least as important as what is a desirable outcome for the long-term. This project had process objectives (called “principles” in some of the documents), and it had longer-term goals, but it lacked shorter-term monitorable substantive performance indicators and did not correct for this at the Mid-term Review. *Fourth*, Project Supervision Reports need to reflect updated progress towards achievement of objectives and to signal to management what actions are needed. *Fifth*, in preparing for policy reforms the impact of each reform on the productive capacity and incomes of the poor in different locations should be projected.

Gregory K. Ingram
Director-General
Operations Evaluation

1. Background

1.1 Zambia's economic performance at the time of independence was quite strong but deteriorated from the mid-1970s, partly due to the decline in copper prices in 1974. The first Structural Adjustment Programs were initiated in the 1980s, but implementation was piecemeal and failed to address the issue of poverty. The mid-1980s saw a rapid economic decline. While some gains arising from the reform program were made in the 1990s, performance in the rural sector was much weaker in the second half of the decade than in the first half. Macroeconomic problems, in particular extremely high inflation, negatively impacted on growth and there were input supply and marketing problems for the poor and for those away from the line of rail.

1.2 Zambia has abundant land and water resources in relation to its population with population densities ranging from 1 to 11 per square kilometer. About 95 percent of the cultivated land area is under small-scale farms. There are about 200 large-scale farms occupying the remainder. GDP from the agricultural sector grew at over 4 percent per annum during the 1990s, a strong performance given governments elimination of agricultural subsidies and liberalization of commodity markets, but the rate of growth slowed substantially during the second half of the decade - the period when the project was underway. Zambia was hit by drought in 1992 and 1994, resulting in a slump in coarse grain production and there was a further drought experienced in 2001. The incidence of poverty in Zambia in the rural areas at about 75 percent is very high, even compared to other sub-Saharan Africa countries, particularly for a land surplus country. Inequality is also high.

1.3 The agricultural sector reforms have resulted in considerable hardship for the poor, particularly those away from the line of rail or in the more arid zones, because the private sector was not ready to handle inputs, particularly in remote areas, nor to purchase large quantities of maize. Over the same period, livestock, important in many areas for draught power, were severely affected by disease.

1.4 **Objectives.** The *original objectives* of the project were stated at two levels: At the level of *process objectives* (predominantly focused on the means) the objectives were:

- to embrace all public investment for the sector in a pool of funding;
- to implement within the existing framework of public agencies which would be decentralized;
- to utilize no Project Implementation Units and use minimal long-term international Technical Assistance;
- to standardize procedures for funding agencies;
- to use a flexible design with annual reviews and adjustments;
- to promote private and beneficiary participation.

1.5 At the level of *medium to long-term goals* (i.e. focused on ends) the objectives were:

- to improve household food security;
- to promote better use of natural resources;
- to generate incomes and employment;
- to increase export earnings.

1.6 As is evident from the above, the project lacked well formulated *substantive* objectives against which to evaluate the project. The means were seen as largely justifying the ends and the means were essentially the entire focus of this first (Bank-wide) ASIP. The objective appears to have been, in effect, to see if one could implement the means within the context of the project.

1.7 The *revised objectives* at mid-term (predominantly focused on means) were:

- to develop and disseminate improved technologies;
- to improve the institutional structure for cost effective service delivery including decentralization;
- to assist institutional development including training, policy formulation and monitoring and evaluation;
- to adopt participatory approaches;
- to privatize agricultural enterprises and promote agribusiness and farmer organizations;
- to increase farm incomes and export earnings (the latter being an objective of a different order to the others – a more substantive objective, but still not sufficiently focussed to delineate shorter-term monitorable indicators).

1.8 The ASIP was a grand plan, introduced with considerable fanfare both by governments and politicians. It was to cover practically every investment area in the sector and be implemented within the institutional framework of the (then titled) Ministry of Agriculture, Food and Fisheries (MAFF), later to become the Ministry of Agriculture and Cooperatives (MAC). Donors procedures for procurement, reporting, accounting, and auditing were to be harmonized as far as possible. The design was to allow for annual reviews and adjustments. The project was embedded in the ongoing public sector reforms in the sector partly aimed at increasing decentralization. It was to be the first in a series of four-year programs.

1.9 **Components.** The Bank intended to be lender of last resort within the array of donor support which implied flexible funding. However, there were four anticipated *original investment components*: (i) policy and institutional improvements in marketing, trade and

pricing, food security, land use, land tenure, institutional restructuring, and strengthening services; (ii) public investments in agriculture research, extension, livestock production, livestock health, fisheries development, rehabilitation of small irrigation, agricultural training, and support for farm power and mechanization; (iii) private sector development to create an enabling environment including financial services, seed multiplication and distribution, seeds and planting material, and new public development; (iv) pilot investment schemes, including a Rural Investment Fund for small-scale capital investments in rural communities and privatization of government farms, and support for the introduction of new technologies. At *Mid-term*, and with many donors continuing elements of the above components on their own, these components were narrowed and adjusted towards more focus on the Bank investments with main investments on research, extension, continued ministry restructuring, the Rural Investment Fund and seed improvement.

2. Findings

2.1 Briefly, the original project design failed to deliver. An ex-President of Zambia is said to have remarked ruefully, “the ASIP came with such noise and fanfare but it went away so quietly”. The restructuring and decentralization of the central ministry took much longer than anticipated. Many donors became disillusioned, particularly since a number had argued for completing the restructuring prior to the ASIP. They also had more immediate concerns about insufficient progress on financial management. Moreover, it became apparent that the grand concept of the ASIP as an umbrella to unify the previous 180 separate donor-funded projects, while promising as an idea, had not been adequately defined, nor owned by the donors. It was unclear what procedures, investments, reforms, and institutional changes would now be different. The concept was something of a mirage in the absence of a common donor funding pot which had never been a realistic possibility. Seeing the failure of the original project, the Bank (belatedly, after three years) at the midterm review, narrowed the concept to support a limited number of specific investments.

The project was conceptually too ambitious, with insufficient donor ownership, and most donors went their own way early on. The belatedly revised project had only modest achievements.

2.2 However, even the restructured project does not appear to have achieved most of the objectives. With respect to restructuring the ministry, this had some initial benefits through decentralization, placing more qualified staff at the district level, but it appears to have had modest impact on the efficiency of the HQ. With respect to research, ASIP funds were used for a number of specific research programs of some value and for setting up the Golden Valley Agricultural Research Trust (GART), but in aggregate most of this does not seem to have increased the flow or quality of technology much, if at all, and it achieved little in the way of sorely needed fundamental reform or broader improvements in public research efficiency and sustainability. The number of released new varieties appears to have been declining. Extension did shift direction from the top down Training & Visit (T&V) system to a more promising participatory group-based approach, but, with operating fund problems, it is questionable in practice how much real impact this has had.

2.3 With respect to reforms, which cannot be assigned so readily to the before or after mid-term review periods, nor attributed so easily to the project, and which, in any case have arisen from a sustained dialogue, implementation performance has been mixed and unstable. For example, fertilizer subsidies were removed, releasing budgetary resources for more efficient sector investments, but a 50 percent subsidy has recently been reinstated and with a 50 percent loan element which, based on past credit experience, this seems likely to drift towards a 100% subsidy through low collection rates. Meanwhile, a proposed new Crop Marketing Authority will aim to attempt to stabilize prices through the purchase and sale of coarse grains without impacting on private sector marketing, but there are concerns that, as in the past, political pressures will quickly distort the operation of such a difficult balancing act.

LESSONS

1. The minimum requirements to reduce risk in Sector-wide programs to an acceptable level are: realism of expectations; a strong lead agency with, at most, modest reform needs; clear characterization of the donor harmonization sought; a sector where the timing is right with respect to the complexity of the reform challenge; and a depth and breadth of government ownership sufficient for the scale of the task.
2. Projecting the detailed steps and phasing for policy and institutional reform, including probabilities of delay, is at least as important and feasible as it is for traditional investments.
3. Defining what is a realistic outcome within an immediate project time frame is at least as important as what is a desirable outcome for the long-term. This project had process objectives (called "principles" in some of the documents) and it had longer-term goals but it lacked shorter-term monitorable substantive performance indicators and did not correct for this even at the Mid-term Review.
4. Project Supervision Reports need to reflect updated progress towards achievement of objectives and to signal to management what actions are needed. (In this case early PSRs were especially weak.)
5. In preparing for policy reforms the impact of each reform on the productive capacity and incomes of the poor in different locations should be projected. (In this case the negative input supply and marketing reforms impacts on different groups were largely predictable and mitigation measures, even if partial, could have been considered earlier.)

FUTURE DIRECTIONS

2.4 For both the Bank and the borrower a number of issues warrant attention in the sector for the future:

2.5 Recent donor and GRZ proposals read largely as "more of the same". While there are ongoing thrusts where persistence is warranted, there is an opportunity to rethink and determine the four or five major opportunities in the rural sector (technology generation,

credit, marketing capacity, groundwater resources, and livestock disease?), to assess the constraints in the enabling environment to pursue these, to clearly define the minimum public good needs in each, and then for donors and GRZ to build the program on the basis of *comparative* advantage of each player.

2.6 The level of public investment in both the sector as a whole and in agricultural research as a share of GDP is lower than most countries in Africa in spite of far more unused land resources than most. This resource imbalance needs to be redressed.

2.7 In a land surplus country, and given the evidence from studies of growth potential from expanding cultivated area, the lack of *medium and long-term credit* is a major constraint¹. The most promising entry point would probably be careful evaluation of the few on-going local programs such as the IFAD/Africare program, followed by rapid scaling up. However, progress also depends on achieving stabilization and reduced inflation².

2.8 As found in the recent ISNAR study, the capacity of the research system is declining³. The proposal to shift the *research system* to a semi-autonomous institute should be pursued, but circumspectly. A new system would need to be small and focused. It would be particularly important to define the expected products and the areas of clear public good responsibility and to match the scale of operation with a realistic projection of future resources available.

2.9 Input availability and market access remain the major problem for small farmers. Studies suggest price of fertilizer is less an issue than availability. The focus should be on relieving the constraints to private sector participation, especially in the less accessible areas, rather than substituting with public services which have high opportunity costs and crowd out private investment.

The failure of ASIP has driven donors away from support for central public good services. This is unfortunate since these are a necessary part of efficient sectoral support, particularly research.

2.10 One impact of the failure of ASIP has been the rush of donors away from support for public good services to now focus on local level projects where they feel they have more control over prioritization, project design and fund utilization. There is now, arguably, excessive risk aversion with a retreat from such central areas as the line agency HQ, M&E capacity building, financial management, research, marketing, rural finance, etc. While the motive for this is understandable, overall sectoral efficiency will be compromised if central

1. In the development literature there is increasing consensus that credit constraints are responsible for much of the weak responses to liberalization by poor farmers.

2. The India Kisan Credit Card Scheme run by NABARD through Cooperative Banks is worth looking at. Farmers qualify based on landholding, need, production pattern, production costs changes etc. for a certain maximum level of credit. The card allows any number of withdrawals and repayments provided they do not at any time exceed the agreed ceiling. Repayments must be within one year of withdrawals. This flexible system is more responsive to farmer's needs than individual loan approvals and reduces the approval burden on banks.

3. It is indicative that the most significant small farm technology of recent years, the new Conservation Farming (CF) basin (pothole) technology and its variants, did not emanate from the public research system but largely through the initiative of an individual and an NGO. Since this involved bringing a technology from another country the public research system would probably never have achieved it simply because of travel budget limitations.

support services are allowed to wither. Optimizing *comparative* advantage of different donors is important.

2.11 Experience with minimum tillage and conservation tillage research elsewhere in the world suggests that there probably still remains much to be learned about the Conservation Farming and Minimum Tillage technologies. This warrants increased attention from public research⁴.

2.12 Animal disease is costing Zambia huge losses yet farmers are well aware that dipping could reduce losses considerably⁵. The availability of dip chemicals, cost of chemicals, extension support, and support for community groups in dip technical, social, and financial management warrants attention⁶.

3. Analysis

RELEVANCE

3.1 Relevance of the project is assessed as **substantial**. Both the original objectives and the revised objectives were clearly consistent with both the Bank's and borrower's strategy, both at the time and now. However, in this PPAR OED ratings given are against the *original* objectives (implicitly therefore also against the original components and targets) not against

the revised objectives⁷. Whether the Bank's and borrower's strategy was well timed given the emerging macroeconomic problems at that point is more debatable.

4. From very limited field observation, and incomplete knowledge of research done to date, potential areas for investigation might include: optimization of expenditure on labor and herbicide (in land surplus locations herbicides look quite competitive but some farm modeling with labor data would help), financial analysis of optimal combinations of practices/expenditure when cash is limited, slope/rainfall/soil specific shapes and distribution of basins, alternative tyne shapes and sowing depths with the Magoye Ripper, alternative periodic deep ripping practices, possibilities for mechanizing basin digging, alternative herbicides and application rates and timing and low labor cost application techniques, work on resistant weeds, further work on plant population with different crops, work on alternative intercrop mixtures and agro-forestry systems, use of inoculation in legumes and interactions with alternative practices and conventional tillage, adaptive knowledge drawn from ways similar practices have been carried out and adapted in other countries (e.g. the Burkina Faso *zais*), combining CF with contour vegetative soil and moisture conservation techniques with vetiver grass etc. (possible source for organic material?), optimal treatment of basins subsequent to planting (there appear to be a range of practices and timing related to "hilling up"), and even historical research on similar practices by earlier generations in Zambia (there is some indication that basins may have been used in the past).

5. One NGO representative commented that, "livestock has died in Zambia".

6. Only a sample of one, but the mission visited one unused dip where, in the past, contributions for chemicals were equal for all group members regardless of number of livestock owned or dipped. Since there was a wide range of herd size it was not surprising that contributions were not forthcoming from enough members to repurchase chemicals. (Relative to many other countries, Zambia has less tradition of community cooperation and less experience with community group decision-making and bookkeeping and therefore may need more assistance in these areas.)

7. This follows the Implementation Completion Report Guidelines (para 23), "if the project was restructured because of faulty project design or poor implementation so that its objective(s) could not be achieved, i.e. if it had been or should have been rated a DO problem project.... the assessment of outcome should be related to the original objective(s) to properly reflect both the accountability and learning functions of ICRs."

EFFICACY

3.2 Efficacy in Relation to the Original Objectives. Overall, efficacy—the extent to which the project objectives were achieved taking into account their relative importance—is rated **negligible**. As noted in the ICR, the food production index fell from 130 in 1995 to 128 in 2001; GDP from Agriculture, having grown quite impressively from 1990 to 1995 prior to the project, leveled off and barely grew at all from 1996 to 2000 (however rainfall is a very important factor in crop production and subsidies declined substantially from 1992); and productivity declined with maize yields falling. Helped by the huge depreciation of the kwacha, exports did increase significantly from US\$55 million in 1995 to US\$125 million in 2001, albeit still lagging the projected increase at appraisal. Diversification did increase, mainly towards cotton, cassava, sweet potatoes, and groundnuts. Some of the diversification represents a positive efficiency shift responding to changed price ratios. Some, such as a portion of the shift into cassava, may be less positive - more indicative of emerging soil fertility problems following a decline in fertilizer use.

The project did not achieve most of its original objectives. There was only modest achievement in the revised project with the somewhat better performances being in the Rural Investment Fund and seed multiplication

3.3 With respect to policy reforms, the ASIP-associated, and earlier, deregulation⁸, although probably beneficial for the longer-term, was too hasty, leaving insufficient time to address mitigating measures for the poor^{9 10}. Input use fell, maize production and maize area fell. The core institutional reform was very slow and, in the views of most donor and NGO observers, did not achieve significant efficiency gains.

3.4 Efficacy in Relation to the Revised Objectives. The mid-term restated objectives to disseminate improved technologies, to improve institutional performance, to assist policy formulation, to adopt participatory approaches, to privatize enterprises, and to increase farm incomes and export earnings, were still only very partially met. It was argued at the time that the broad sectoral objectives remained relevant. However, they were far too ambitious and generic for a narrower single donor (i.e. the Bank) project with only two more years to run and questionable follow-on phases.

8. It is difficult to assess what reforms to attribute to ASIP since reform has been an ongoing process of dialogue.

9. For example, as reported by one NGO, due to the hasty deregulation of marketing, many private traders bought maize with promissory notes from many small farmers - who saw no alternative at the time - and simply disappeared, so families lost what little surplus cash they had, setting them on a subsequent impoverishing downward spiral due to lack of cash for farm inputs etc..

10. One lady farmer in Western Province probably summed up quite well how farming conditions have changed over the years for many small farmers, saying, "Over the last 5 years (with the deregulation) things were at first very difficult, marketing and getting inputs was very difficult, but it has become a little better in the last two years. But many years ago farming was better than it is now." An extension officer also told a similar story.

3.5 MAC Restructuring. This was an objective in both the original and the revised objectives. Most donors, NGOs and a number of District staff, see few significant improvements in operational efficiency, in fact a number consider MAC performance to be worse following ASIP. Some note that one cannot expect a ministry to restructure itself because the incentives are perverse. The depth of ownership in the ministry at the time is questionable. One observer said that the ownership was really only in the Policy and Planning Division which played the major role in project preparation.¹¹ Indeed, some other Divisions fought actively against the restructuring. The number of Departments was 9 before and is now increased to 11. Number of approved positions has stayed about the same but because of many vacancies due to budget constraints staff numbers are down. Some managers in MAC feel that the almost complete removal of staff at the Provincial level was excessive and, to some extent, this has now been reversed. Morale is very low partly due to low salaries that have not kept up with inflation. There have been some process achievements. While the proposed Project Coordinating Committee never functioned properly, the Agricultural Consultative Forum, which includes government, donors, NGOs, and the private sector, and was set up after the mid-term, has been found by many participants to be a useful forum for ideas. However, over the project period, it did not substitute for the role of the Coordinating Committee.

Most observers of MAC do not yet see significant improved efficiency, particularly at HQ.

3.6 District Restructuring. Some modest initial skills improvements with a deconcentration of staff to the districts have been quickly negated by lack of financial sustainability. Typically, District budget estimates, when aggregated and passed through to the Ministry of Finance, are cut by about two-thirds. Then, over the year, about one-half of that actually reaches them. So they receive approximately 15 percent of what they believe they need to operate. Flexibility of funds allocation at District level had somewhat improved early in the project, but the freedom of District Agricultural Coordination Officers to redirect funding was lost again to the center, due to separate donor projects and increasing budget constraints. One budget casualty has been the *District Agricultural Committee* (DAC) which was a promising innovation under ASIP and functioned reasonably well while resources were available. It is now much less effective since there is no funding available and members are often unable to travel to meetings. There were also criticisms by District staff that the new arrangement for the Technical Services Branch, split into field-located teams, was not working well because the teams tended to focus on the District where they reside due also to lack of funding for transport.

3.7 Extension/Research/Seeds. Attributable impact data is very limited. There is no project-surveyed impact data on production or enterprise or farm household incomes. Even if there were, with the complications of many overlaid policy reforms and two droughts, such data would be very difficult to attribute. Based on reported monitoring data from extension staff, project input-level performance has been modest. Out of about 600,000 farm families,

¹¹ Indicative of the lack of ownership is that there were even payments (termed "allowances"), representing a significant portion of their annual income, made for staff to participate in project preparation and attend the additional meetings required to carry out this work. Although ministry salaries are indeed extremely low - indicative of a wider problem, the need for such payments is hardly an indicator of ownership.

the number of farmers adopting one or more technologies rose quite modestly from 175,000 in 1998 to 200,000 in 2001^{12 13}. The number of field demonstrations grew substantially from 2,300 in 1998 to 10,500 in 2001 but has since fallen. The number of farmers adopting conservation farming technologies fell towards the end of the project from 39,246 in 1998 to 20,000 in 2001¹⁴. The number of film and radio broadcasts was 15 in 1996, rose to a peak of 66 in 1998 partly associated with project support and then fell to 16 in 1999. A general dearth of extension leaflets was observed by the mission in the field, and the numbers of the few leaflets printed seemed only sufficient for extension staff and not for farmers also. Staff training sessions and workshops rose from 84 in 1996 to 518 in 1999 but appear to have fallen since then although more recent data are not available. The number of farmer courses fell from 96 in 1996 to 24 in 1999. Training is generally considered to have been better under the previous project - Zambia Agricultural Research and Extension Project (ZAREP) than under ASIP. ZAREP supported the T&V system which had built-in regular training every two weeks. In research, the number of improved varieties released fell from 15 in 1998 to 6 in 2001 (with 3 each in 1999 and 2000), but of course released varieties would lag investment by at least 5 years so attribution to ASIP is lagged. The quantity of improved seed multiplied through the Soils and Crops Research Branch increased from 3,032 tons in 1998 to 18,262 tons in 2001, and, from the informal sector from 2,500 tons in 1998 to 3,700 tons in 2001, and private seed companies approximately doubled their seed production over that period¹⁵.

3.8 Participatory extension approaches were enhanced under ASIP but the impact at farm level appears modest. In a limited number of interviews with farmers the mission found it hard to elicit, even with prompting, clear acknowledgement that the extension *approach* per se had changed significantly. It may be that farmers have benefited from, but not noticed, the change but most farmers gave much more prominence to simply the number and type of new technologies they had learned about and frequently mentioned their other priorities of input

12. There are doubts about the quality of this data since in another MAC/MAFF report the equivalent data shows 66,000 farmers for 1998 but with no data for 2001.

13. An adoption rate study by MAC dated November 2000 found that over 90% of farmers knew their local extension staff, with 44% belonging to groups "known to be organized" by extension staff. Over 80% of farmers claim to have got their information from MAC staff, with 11% from other farmers and 5% through NGOs. About 60% of maize varieties currently being planted were obtained by farmers prior to the end of 1996 and about 40% from 1997 to 2000, i.e. approximately over the ASIP period - not a bad adoption rate, although the area of improved varieties is not known. In groundnuts, about 43% of varieties were obtained from 1997 to 2000 but about 80% of farmers planted local seed. In beans the penetration of improved varieties has been less impressive, most seeds are local varieties. Penetration of improved cassava varieties has been limited with 100% of farmers planting at least some local and only about 26% planting improved varieties. About 40% acquired their cassava material more than 10 years ago. Surprisingly as many as 42% of farmers claimed to keep some form of farm records. About 40% of farmers have adopted the Conservation Farming basins on some land (again, this is inconsistent with the earlier reported monitoring data).

14. There may be a data problem here, since the mission's observation was that this technology had been quite well received and, particularly in dry seasons, was offering significant benefits.

15. On the face of it, there seems to be some anomaly between the rather modest increase in number of farmers adopting one or more improved technologies e.g. a 25,000 farmer increment over four years (mostly cultivating not more than about 2 hectares), and the substantial increase in total improved seed multiplication (which excludes other additional seed/material such as legumes and cassava cuttings) since adoption of improved seed is counted in the surveys as a new technology. The figures might suggest that, even without other technologies, about 33,000 *incremental* tons of improved seed was spread over not more than about 25,000 farmers i.e. more than a ton per farmer. However interpreting these data is complicated by the fact that a lot of seed is used by commercial farmers and by the fact that adoption by the 25,000 can include more than one technology, etc.

supply, marketing, and credit. The Conservation Farming (CF) technology has undoubtedly had some positive impact on food security, especially in drought years when CF, if done correctly, can make the difference between a crop and no crop. Even on a portion of the crop, this is a valuable risk reduction strategy for the poor. Its yield impact in higher rainfall years may be more modest but even then it should still improve input use efficiency. However, it is of significance that the introduction of CF did not come via the public research system but largely through the initiative of an individual with the Conservation Farmers Union.

3.9 Rural Investment Fund. The RIF gave perhaps the best outcome of ASIP components but still with only moderately satisfactory impact due to utilization questions. Completion of Rural Investment Fund projects was 211 in 1998, 445 in 1999, 776 in 2000, 245 in 2001, in each year achieving more than the project target. About 50% of RIF investments by value were in social types of projects and about 50% in productive investments – a higher share in production than many similar projects globally. However, there are questions about utilization levels and net benefits, particularly of the productive investments. This is discussed later under the heading of Efficiency.

3.10 Monitoring and Evaluation. Monitoring and Evaluation were weak, particularly Evaluation. Initially, with the sector-wide ASIP concept, the main indicators proposed in the appraisal report were simply the aggregate rural sector indicators such as agriculture GDP, food production index, etc. However, some physical monitoring of components was carried out, particularly for RIF and extension, through the monitoring reporting system. Impact studies rely largely on monitoring data and suffer from the usual problem of lack of timely baseline data. Physical monitoring remained totally separate from financial management - as it so often is - to the detriment of resource allocation decision making.

EFFICIENCY

3.11 Efficiency, against the original objectives, is rated **negligible** - since the original objectives were mostly not met, notwithstanding significant expenditures. For the revised project, efficiency from mid-term on is rated as modest, but variable by component . No overall project Economic Rate of Return was calculated in the ICR and it is not attempted in this PPAR due to lack of data.

3.12 Research ERRs. There are four ERR calculations available for selected individual elements of research, but these do not cover only the ASIP investments and straddle the ASIP period. Three of the four indicate relatively modest ERRs by the global research standards which typically show very high ERRs.

3.13 Extension Efficiency. Extension efficiency is difficult to assess. There is insufficient data for economic analysis. With the shift from high cost T&V to reduced staff numbers using a participatory approach there have been some overall cost reductions. However, relating these to benefit streams is difficult. One DACO noted that, although the new approach was lower cost than T&V in several respects, it requires substantial resources in the initial stages when staff spend a lot of time interacting with communities. However, he was hopeful that this was largely a startup expenditure. As noted above, benefits so far appear modest.

While the RIF established about 1800 items of potentially beneficial social and productive infrastructure, economic efficiency is questionable because of low utilization, mainly due to weak community organizations and insufficient community operating funds.

3.14 Rural Investment Fund Efficiency. While the performance of the Rural Investment Fund in terms of putting in place infrastructure investments has been generally moderately satisfactory, overall efficiency is questionable. The Rural Investment Fund Final Assessment dated May 3, 2002¹⁶ prepared by GRZ finds that, "at present, based on the percentage of the projects which are experiencing operational difficulties and the proportion of total investments which they represent, RIF has not yet achieved a satisfactory rate of return ...". While there was limited case analysis in the study the conclusion is probably correct. Many investments appear underutilized. The mission saw small dams which only water livestock and have no irrigation development, cattle dips which are not used because the group cannot fund the chemicals, and crop storage facilities which are not used because of changes in the marketing arrangements or the inability of the group to either manage or effectively rent out the facilities. Most poultry projects have had operational problems. There are reported problems with maintenance of boreholes, although these generally have been quite successful. The mission observed missed opportunities to maximize benefits of small dams through placing wells below or near dams for human use and to extend the livestock watering season¹⁷ and little stocking with fish¹⁸, although stocking with fish has proven to be a challenging community management exercise in many cases.

3.15 Agricultural Production Efficiency. Overall sectoral resource use efficiency probably improved following the reduction in fertilizer subsidies and the removal of maize price support. However, this can only be partly associated with ASIP and ASIP preparation since much of it was initiated earlier. In any case, as noted above, fertilizer subsidies are now reappearing. There have probably been efficiency gains from the privatization of government owned farms partly associated with ASIP but assessing this would call for a detailed study of a sample of farms.

16. This is a difficult study to interpret because the summary findings appear to be somewhat at odds with the main text.

17. One particularly successful sub-project at Mubiana Dam is reported due partly to a strong group and strong leadership.

18. In Bangladesh, women's groups supported by Bank projects have been extremely active in the development of intensive fish farming in small dams and ponds, in some cases making such high incomes as a group so as to transform a village economy. It may well be that assigning women's groups to manage community fisheries in Zambia would result in improved community cooperation.

3.16 **MAC Efficiency.** As indicated above, most donor and NGO observers do not see significant efficiency gains from the reforms, although some acknowledge that the deconcentration may have had some impact. Some saw the process of restructuring itself as having been inefficient¹⁹. One indicator of poor MAC efficiency is the fact that the largest project component, the RIF component, was largely ineffective until it was adjusted to a semi-autonomous status to somewhat separate it from MAC.

3.17 **Seed Multiplication Efficiency.** There is insufficient data to analyze this, but it seems likely that there have been gains in efficiency in seed multiplication through the greater use of farmer seed multiplication. It appears to have relatively low supervision costs at the field level and generally good results. However, much of it is serviced by NGOs and, again, benefits over the ASIP period can only be partly attributed to ASIP support.

3.18 **The Question of Incrementality.** When most investments in the sector are purportedly inside the boundaries of a “project” it becomes difficult to identify incrementality during a period when the government budget is changing. However, it appears that public investment over the period of ASIP, and therefore incremental sectoral investment, declined in real terms. The Bank/GRZ July 2000 Public Expenditure Review shows actual nominal expenditure rising from about K20 billion in 1996 to between K30 and K35 billion from 1997 to 1999, falling back to about K20 billion in 2000. But with extremely high inflation over that period, this represents a substantial decline in real terms. Alongside this, donor expenditure rose from about K12 billion in 1996 to K38 billion in 1999. Given the importance of agriculture in Zambia this overall decline in public investment was probably inefficient in economic terms and certainly agriculture GDP stagnated over the same period, although partly a function of drought. However, the reductions in subsidies have probably improved sectoral allocative efficiency.

INSTITUTIONAL DEVELOPMENT

3.19 Institutional development related to both the original and revised objectives was **modest** at best. Gains in some areas have been negated by losses in others. Lack of sustainability cannot be fully separated from institutional development since a degree of sustainability is implicit in worthwhile institutional development. As noted, there were modest initial gains from the deconcentration of staff to District level²⁰. There was an appropriate shift away from a top-down T&V approach to a participatory group approach but the impact at farmer level does not seem to be more than modest. Most observers see few gains from the restructuring at HQ, a process that is still going on - currently with some reversion underway to the earlier structure. The strengthening of the Procurement Unit appears to have been successful and appears to even have had impacts outside MAC in improving overall borrower tendering procedures, an important achievement.

19. For example, one staff member noted that when jobs became open for application the hierarchy was highly unlikely to change since, to apply for a position at the next level up, staff at the lower level had to get their applications signed by their boss – the person they hoped to replace.

20. But this seems to have been gradually eroded to the extent that DACO's now ask what the point is of them preparing a district budget since HQ are going to change it anyway and largely direct funding allocation from HQ.

3.20 The establishment of GART was a positive move for research and for the D part of R&D but, for overall assessment, this is negated by the failure to more fundamentally address the rest of the national research system. There was probably a deterioration over the ASIP period and, again, no financial sustainability. In particular, the collapse of the promising Farming Systems Research activity due to lack of funds has weakened research/extension linkages which were, in any case, not strong. One DACO considered Research/Extension liaison was weak with meetings at Mt Makulu largely presenting what researchers intended to do rather than fostering a two-way relationship²¹.

3.21 The project achieved some gains in skills from training provided at both higher and lower levels but due to extremely low salaries many skills have been lost by the public service over the project period. In some cases these skills remain in Zambia. In some cases they do not.

BANK PERFORMANCE

3.22 Bank performance was, on balance, **unsatisfactory**, although the evolving macro-economic situation was unusually challenging for sectoral progress. What really happened for this ambitious sectoral approach to break down so fast? The following appear to have been the main problems:

- during much of preparation, insufficiently precise language was used, allowing donors to read into the emerging approach whatever suited them.
- It was not clear what "being inside ASIP" and "being outside ASIP" really meant. It seems to have meant different things to different donors. When it became apparent that virtually no donor harmonization was going to be possible, it appears that a project could be "inside ASIP" simply if it was consistent with the quite broad sectoral objectives and had a worthwhile period still to run. Yet, even without ASIP, consistency with sectoral objectives would have been needed for a project to be acceptable.
- Insufficient attention was paid by the Bank to initially less than frank but quite strongly felt concerns of donors. Towards the end stronger donor reservations were expressed but by then the train had gathered too much speed hence donors felt steamrollered.
- The fault by no means lies only with the Bank. Some donors were less than frank and later, having gone along with the program for better or worse, were perhaps too ready to turn and run when difficulties surfaced, leaving the Bank to carry the tattered

While some aims of the sector wide approach were promising in theory, in practice the excessively complex package, at that time, was unrealistic. Most donors felt steamrollered by the Bank into a harmonization that was insufficiently defined, and coordinated by a ministry with weak financial and management capacity.

21. As one comparator, the mission found research/extension liaison to be weaker in Zambia than recently observed on a similar mission in Bangladesh.

remnants of the concept. The files suggest that most donors were quite well aware of what they were getting into, often participating in missions. Whether the donor field offices were accurately and consistently reflecting the views of their HQs is difficult to assess after so long. But the Bank did, in fact, make efforts in this direction by sending a staff member to visit donor headquarters in their capital cities.

- The Bank was not open about the extent to which the Bank itself was prepared to harmonize procedures. Prior to appraisal an internal e-mail from a Bank Procurement Specialist makes it very clear that harmonization was fine provided it was others who did the harmonizing.
- The Bank was committed to achieving Zambian ownership by getting preparation done by Zambians. Initially, the Bank focused more on facilitating the process. The Bank may have stood back too far too early on the substance. This resulted in still weak preparation documents quite late in the process resulting in the buildup of pressure towards the end. Also, the Bank perhaps mistook involvement in preparation, for which (surprisingly) government staff were paid extra remuneration and were thus unlikely to be reluctant about, for genuine ownership.
- The project was initiated in a highly problematic macroeconomic and institutional environment and was therefore high risk with respect to timing.
- It is clear in retrospect, comparing the more successful Education SIP, that the more complicated agricultural sector was a risky place to start a SIP and that, with MAC needing substantial restructuring, this was a risky institution to start off with.
- Arguably, the Bank avoided the core issue in research. While the project initiated two research trusts (the cotton one still with an uncertain future since the proposed cotton levy has yet to be approved), it simply provided funds for “more of the same” to the public research system which needed fundamental reform. Indeed, while GART is certainly a useful institution for R&D and for private partnerships, it could be argued that, to some extent, it represents a sleight of hand to bypass the core problem of public sector research.
- The Bank seems not to have worked sufficiently with GRZ to manage beneficiary expectations. Indeed, it may have fostered unrealistic expectations. But this was exacerbated by politicians fueling expectations particularly in relation to rural credit. This was not without basis since earlier in project preparation credit had been expected to be a component.

3.23 Largely for the above reasons, Quality at Entry was unsatisfactory. The project was rated as “at risk” in 1996, 1997, and 1998.

3.24 In supervision, Bank performance was weak over the first two and a half years. Project Supervision Report forms in the early years gave inadequate information to management. Partly as a result of this, and also because of lack of continuity in Task Managers, it took three

years to react to the emerging problems. Supervision improved subsequently with some sound mid-term decisions and, in 2000 QAG rated supervision quality satisfactory. However, even at the mid-term review there were weaknesses. The project was redesigned but not formally restructured, although there was an amendment to the Development Credit Agreement related mainly to shifts in disbursement categories. The problems encountered over the first two years were sufficient for the Bank to contemplate cancellation. This level of concern is an indicator that should have triggered a full restructuring with completely revised objectives and new indicators tied to those objectives.

3.25 There were two procurement/disbursement issues during supervision. First, staff in the Procurement Unit in MAC complained of delays with the procurement “no objections” from the Bank which were said to be worse than most donors. They also complained that Terms of Reference approved earlier by the Bank had been queried again later, presenting problems for procurement management. Second, disbursement of operating funds appears to have been at odds with the appraisal intent, although there is no evidence of funds misuse. In the appraisal report, the amount of incremental operating costs to be funded by IDA was US\$4.1 million. In the event, by the time the project closed, disbursement for incremental operating costs had reached a massive US\$18.8 million. This difference is not accounted for by a minor mid-term adjustment in the percentage to be disbursed for operating costs. What appears to have happened is that, at some point, disbursement started to be made for non-incremental operating costs. This would have substituted for the declining capacity of government to fund the ministry. Since it is difficult to define what should have counted as incremental in the first place, the mission has been unable to disentangle this further.

BORROWER PERFORMANCE

3.26 Borrower performance was also rated **unsatisfactory**. While the Bank certainly spearheaded the concept, a considerable share of the failure of implementation can be attributed to the borrower, although not necessarily to MAC itself since the restructuring was larger than the ministry alone. In particular, the delays with restructuring could have been better handled and the length of time required better forecast both by the borrower and the Bank. Many of the restructuring steps required were known and by no means unpredictable notwithstanding a number of areas of uncertainty. Borrower ownership suffered after the transfer of the Minister and PS who were the main champions. (Changes in government following elections were a part of this shift.) As noted in the ICR, MAC’s central units for planning, marketing information, and monitoring and evaluation were weak and the modest strengthening has not, so far, achieved much. Borrower performance in financial management was particularly weak up to the time of the Mid Term Review²². While a number of important policy decisions were made, there has been a general lack of consistency and reversals by

22. The July 2000 Public Expenditure in the Agriculture Sector Review, a joint review by MAC/MAFF and the World Bank, found the following: “Generally, the expenditure management and controls were inadequate due to weaknesses in planning and budgeting processes as well as financial management and monitoring. With heavy delays in accounting for the flow of funds, almost all donors had pulled out of from the FMU (Financial Management Unit) mainly due to poor performance of FMU. Moreover, there was no specifically responsible institution that records and accounts the donor funds flow into the economy. Still there is no reliable record that provides aggregate annual donor’s resource inflow.”

government, for example on input supply and marketing, which are damaging to private sector expectations and therefore sustained investments.

SUSTAINABILITY

3.27 Sustainability is rated **unlikely**, almost entirely on the grounds of concerns about financial sustainability, contrasting with the ICR rating of likely. Sustainability cannot be divorced from outcome since an original intent of the institutional reform was to put in place sustainable sectoral management and support systems. In the appraisal report the Bank presented somewhat confusing evidence suggesting that the overall ASIP would be financially sustainable on the grounds that the total ASIP budget projected was less than a trend derived from recent total sectoral budget allocations -- a fairly bold assumption given the macroeconomic situation. In any case, it was not, in fact, the case that everything calling for government contribution in the sector was inside the ASIP.

3.28 The financial sustainability reality now is sobering. In *extension*, staff do not get allowances, have houses in disrepair, manage with bicycles needing repair, only receive training when a donor project happens to come along, get little support with audiovisual aids, and have little linkage with research due to lack of funds for Subject Matter Specialists to travel and the collapse of the Farming Systems Research units. Extension staff salaries at the camp level are well below the lowest global poverty level of US\$1 per capita per day²³. In many cases, no due allowances have been paid for three years. In *research*, operating costs per researcher have now fallen to about \$20,000 when about \$40,000 to \$50,000 is a bare minimum to adequately utilize researcher skills. Staff losses have been high and a recent International Service for National Agricultural Research (ISNAR) report found low morale. At the central ministry level, there are few vehicles, the best reside with the Rural Investment Fund (RIF) who, significantly, are somewhat autonomously funded. Indeed, throughout the sector, there is a correlation between the availability of funds and the degree of autonomy. For example, GART, with substantial autonomy, has generally good transport and operating funds, RIF, with some degree of autonomy, has reasonable transport and operating funds (and somewhat higher contract based salaries), and MAC, with no autonomy, has very poor transport and very low operating funds²⁴.

23. Assuming a 5 person family and no other household income, salaries are about 40 US cents per capita (perhaps 50 cents if housing is valued at somewhat more than the housing deduction).

24. Another particular financial sustainability concern is that, in the ministry restructuring, lack of funds seems to have resulted in staff taking early retirement receiving agreed severance packages several years late at un-indexed prices after massive inflation losses over the intervening period. It is believed that a survey would reveal widespread severe hardship given also the erosion in the value of annual pensions. It is not clear that the ability to fund the retrenchments was adequately analyzed prior to the restructuring. This fell largely outside MAC's control.

3.29 Sustainability of farmer groups operating RIF subprojects was found by the 2002 RIF Assessment to be quite variable with generally satisfactory performance in well-established groups with substantial social capital and in social types of investment and less in low social capital groups and in productive types of investment²⁵. In particular poultry, piggeries, and fish ponds faced problems²⁶. Local contribution in RIF was supposed to be 20 percent. It is almost certainly nowhere near that level, probably well below 10 percent. Considerable creativity has been used in valuing local labor.

3.30 Sustainability of the generally quite successful farmer-based seed multiplication program is also, on balance, unlikely since it is largely sustained now by a donor project which will come to an end soon. No sustainable system appears to be in place. As for much of the agriculture sector interventions in Zambia, the program relies too much on the uncertain windfalls of the ebb and flow of unpredictable donor projects.

Sustainability is unlikely. GRZ budget is a low % of sector GDP - not enough to keep project activities going without donor support. There is insufficient cost recovery or private investment to substitute. Operating costs for research /extension are too low for effective use of staff. Extension salaries are below global poverty levels.

25. While the 2002 RIF Assessment is useful, the Executive Summary seems much more positive than the main text.

26. Characteristics for success included kinship or religious bonds, past experience of working together, strong leadership, mentoring relationships (e.g. with an NGO or government official), and a strong common interest in the subprojects component.

Annex A. Basic Data Sheet

ZAMBIA AGRICULTURAL SECTOR INVESTMENT PROGRAM (Cr. 2698)

Key Project Data (Amounts in US\$ million)

	<i>Appraisal Estimate</i>	<i>Actual or current estimate</i>	<i>Actual as percent of Appraisal estimate</i>
Total project costs	350.0	248.7	71
Credit amount	60.0	53.6	89

Project Dates

	<i>Original</i>	<i>Actual</i>
Initiating memorandum	07/86	07/86 (but prep. effectively started 92)
Board Approval	1/25/94	03/30/95
Effectiveness	12/22/95	12/22/95
Closing date	12/31/99	12/31/01

Staff Inputs (staff weeks)

	<i>Actual Weeks</i>	<i>Actual US\$000</i>
Preappraisal	589.1	931.0
Appraisal/Negotiations	151.6	558.7
Supervision*	446.2	1768.8
Completion**	NA	NA
Total	1186.9	3258.5

Mission Data

	<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Staff days in field</i>	<i>Specialization represented¹</i>	<i>Performance rating² Implementation Status</i>	<i>Types of Problems³ Development objectives</i>
Appraisal Negotiation	03/24/1994	14				
	07/24/1994	14		Financial analyst/team leader, sector investment specialist, agricultural economist, agriculturalist (2), financial analyst, economist (5), land use specialist, disbursement officer, procurement officer, lead specialist, planning and budgeting specialist.		
	11/8/1994	4		Sector investment specialist, economist, planning and budgeting specialist, operation specialist		
Supervision	06/12/1995	7		Sector investment specialist, planning and budgeting specialist	S	S
	11/21/1995	3		Sector investment specialist, planning and budgeting specialist, financial analyst.	S	S
	03/15/1996	6		Sector investment specialist/team leader, natural resource management specialist, financial analyst, planning and budgeting specialist, operations officer	S	S
	06/28/1996			Sector investment specialist/team leader, natural resource management specialist, financial analyst, agriculturalist, economist, operation officer.	S	U
	02/24/1997	9		Agriculturalist, sector investment specialist, natural resource management specialist, operations officer, training specialist, agricultural economists, anthropologist, agricultural services specialist	S	U
	08/15/1997	1		Agricultural economist/task manager.	S	U
	11/24/1997	9		Agricultural economist/task manager, agriculturalists (2), agricultural services specialist, financial analyst, operations analyst, disbursement and procurement specialist, irrigation engineer, private sector development specialist.		
	03/28/1998	4		Agricultural economist/task manager, agriculturalist, agricultural service specialist, financial analyst.	S	U
	07/04/1998	4		Agricultural economist/task manager, agriculturalist, agricultural service specialist, irrigation specialist.	S	U
	12/03/1998	7		Agricultural economist/task manager,		

<i>Date (month/year)</i>	<i>No. of persons</i>	<i>Staff days in field</i>	<i>Specialization represented¹</i>	<i>Performance rating² Implementation Status</i>	<i>Types of Problems³ Development objectives</i>
			agriculturalist, financial analyst, agricultural officer.		
03/19/1999	3		Agricultural economist/task manager, agriculturalist, financial analyst, agricultural officer.		
07/29/1999	4		Agricultural economist/task manager, financial analyst, agricultural officer, agriculturalist.		S
12/17/1999	8		Agricultural economist/task manager, agriculturalist, agricultural officer, financial analyst, economist, economist.	S	S
02/16/2000 (limited)	4		Economist/team leader, economist, agricultural specialist.	S	S
06/15/2000	1		Economist/team leader, economist	S	S
09/19/2000	5		Economist/team leader, economist, financial analyst, agriculturalists(2)	S	S
04/10/2001	2		Economist/team leader, economist, agricultural specialist.	S	S
07/12/2001	2		Economist/team leader, economist, agriculturalists.	S	S
ICR 03/04/2002	4		Agricultural service specialist/team leader, research management specialist, policy analyst, economist.		