Document of
The World Bank

Report No.: 40109 - TZ

PROJECT PERFORMANCE ASSESSMENT REPORT

AND SECTOR OVERVIEW

UNITED REPUBLIC OF TANZANIA

AGRICULTURAL SECTOR MANAGEMENT PROJECT (CREDIT 2537)
SECOND AGRICULTURAL RESEARCH PROJECT (CREDIT 3036)
NATIONAL AGRICULTURAL EXTENSION PROJECT II (CREDIT 2899)

June 18, 2007

Sector, Global and Thematic Evaluation Division
Independent Evaluation Group

Currency Equivalents (annual averages)

Currency Unit = Tanzania Shilling

1990	US$1.00	Tsh195
1991	US$1.00	Tsh219
1992	US$1.00	Tsh298
1993	US$1.00	Tsh405
1994	US$1.00	Tsh510
1995	US$1.00	Tsh575
1996	US$1.00	Tsh580
1997	US$1.00	Tsh612
1998	US$1.00	Tsh665
1999	US$1.00	Tsh745
2000	US$1.00	Tsh800
2001	US$1.00	Tsh876
2002	US$1.00	Tsh967
2003	US$1.00	Tsh1038
2004	US$1.00	Tsh1129

Abbreviations and Acronyms

ASDP	Agriculture Sector Development Program
ASMP	Agricultural Sector Management Project
CAS	Country Assistance Strategy
DADO	District Agricultural Development Officer
DANIDA	Danish Aid Agency
DFID	Department for International Development (UK)
DRC	Domestic Resource Cost
ERR	Economic Rate of Return
FFS	Farmer Field School
GOT	Government of Tanzania
GTZ	German Technical Assistance Agency
ICR	Implementation Completion Report
IDA	International Development Association
IEG	Independent Evaluation Group (earlier OED)
IFPRI	International Food Policy Research Institute
IEGWB	Independent Evaluation Group (World Bank)
LGA	Local Government Authority
LIL	Learning and Innovation Loan
MAC	Ministry of Agriculture and Cooperatives (prior to reorganization)
M&E	Monitoring and Evaluation
MKUKUTA	The National Strategy for Growth and Poverty Reduction
MOA	Ministry of Agriculture
MTR	Midterm Review
NAEP II	National Agricultural Extension Project II
NALERP	National Agriculture and Livestock Extension Rehabilitation Project
NORAD	Norwegian Aid Agency
OJT	On the Job Training
PAD	Project Appraisal Document
PADEP	Participatory Agricultural Development and Empowerment Project
PPAR	Project Performance Assessment Report

PRSP	Poverty Reduction Strategy Paper
PSAC1	Programmatic Structural Adjustment Credit
PSRC	Parastatal Sector Reform Commission
SAR	Staff Appraisal Report
SIDA	Swedish Aid Agency
SUA	Sokoine University of Agriculture
T&V	Training and Visit (system of extension)
TARP II	Second Agricultural Research Project
QAG	Village Extension Worker

Fiscal Year

Government: July 1 to June 30

Director-General, Evaluation	:	Mr. Vinod Thomas
Director, Independent Evaluation Group (World Bank)	:	Mr. Ajay Chhibber
Manager, IEGSG	:	Mr. Alain Barbu
Task Manager	:	Ms. Nalini Kumar

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

About this Report

The Independent Evaluation Group 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, IEGWB annually assesses about 25 percent of the Bank's lending operations through field work. 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.

To prepare a Project Performance Assessment Report (PPAR), IEGWB staff examine project files and other documents, interview operational staff, visit the borrowing country to discuss the operation with the government, and other in-country stakeholders, and interview Bank staff and other donor agency staff both at headquarters and in local offices as appropriate.

Each PPAR is subject to internal IEGWB peer review, Panel review, and management approval. Once cleared internally, the PPAR is commented on by the responsible Bank department. IEGWB incorporates the comments as relevant. 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.

About the IEGWB Rating System

IEGWB's use of multiple evaluation methods offers both rigor and a necessary level of flexibility to adapt to lending instrument, project design, or sectoral approach. IEGWB 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 (additional information is available on the IEGWB website: http://worldbank.org/ieg).

Outcome: The extent to which the operation's major relevant objectives were achieved, or are expected to be achieved, efficiently. The rating has three dimensions: relevance, efficacy, and efficiency. Relevance includes relevance of objectives and relevance of design. Relevance of objectives is 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). Relevance of design is the extent to which the project's design is consistent with the stated objectives. Efficacy is the extent to which the project's objectives were achieved, or are expected to be achieved, taking into account their relative importance. Efficiency is 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. The efficiency dimension generally is not applied to adjustment operations. Possible ratings for Outcome: Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Risk to Development Outcome: The risk, at the time of evaluation, that development outcomes (or expected outcomes) will not be maintained (or realized). Possible ratings for Risk to Development Outcome: High Significant, Moderate, Negligible to Low, Not Evaluable.

Bank Performance: The extent to which services provided by the Bank ensured quality at entry of the operation and supported effective implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of supported activities after loan/credit closing, toward the achievement of development outcomes. The rating has two dimensions: quality at entry and quality of supervision. Possible ratings for Bank Performance: Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Borrower Performance: The extent to which the borrower (including the government and implementing agency or agencies) ensured quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development outcomes. The rating has two dimensions: government performance and implementing agency(ies) performance. Possible ratings for Borrower Performance: Highly Satisfactory, Satisfactory, Moderately Satisfactory, Moderately Unsatisfactory, Unsatisfactory, Highly Unsatisfactory.

Contents

This report was prepared by Nalini Kumar and Ridley Nelson (Consultant). Ridley Nelson assessed the projects in October 2006. Marie Charles provided administrative support and April Connelly provided research assistance with data.

Principal Ratings

AGRICULTURAL SECTOR MANAGEMENT PROJECT (ASMP)

	*ICR**	*ES**	*PPAR*
Outcome	Satisfactory	Satisfactory	Moderately Satisfactory
Institutional Development Impact **	Substantial	Substantial	
Risk to Development Outcome			Modest
Sustainability ***	Likely	Likely	
Bank Performance	Satisfactory	Satisfactory	Satisfactory
Borrower Performance	Satisfactory	Satisfactory	Satisfactory

SECOND AGRICULTURAL RESEARCH PROJECT (TARP II)

	*ICR**	*ES**	*PPAR*
Outcome	Satisfactory	Satisfactory	Moderately Unsatisfactory
Institutional Development Impact **	Substantial	Substantial	
Risk to Development Outcome			High
Sustainability ***	Likely	Likely	
Bank Performance	Satisfactory	Satisfactory	Moderately Satisfactory
Borrower Performance	Satisfactory	Satisfactory	Moderately Unsatisfactory

NATIONAL AGRICULTURAL EXTENSION PROJECT II (NAEP II)

	*ICR**	*ES**	*PPAR*
Outcome	Satisfactory	Moderately Satisfactory	Unsatisfactory
Institutional Development Impact **	Substantial	Substantial	
Risk to Development Outcome			High
Sustainability ***	Likely	Likely	
Bank Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory
Borrower Performance	Unsatisfactory	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 IEGWB product that seeks to independently verify the findings of the ICR.
** As of July 1, 2006, Institutional Development impact is assessed as part of the Outcome rating.
*** As of July 1, 2006, Sustainability has been replaced by Risk to Development Outcome. As the scales are different, the ratings are not directly comparable.

Key Staff Responsible

AGRICULTURAL SECTOR MANAGEMENT PROJECT (ASMP)

Project	*Task Manager/Leader*	*Division Chief/ Sector Director*	*Country Director*
Appraisal	F. Byamugisha	Sushma Ganguly	Francis Colaco
Completion	Tekola Dejene	Karen Brooks	James Adams

SECOND AGRICULTURAL RESEARCH PROJECT (TARP II)

Project	*Task Manager/Leader*	*Division Chief/ Sector Director*	*Country Director*
Appraisal	Satish Kumar	Sushma Ganguly	James Adams
Completion	Ladisy Chengula	Karen Brooks	Judy O'Connor

NATIONAL AGRICULTURAL EXTENSION PROJECT II (NAEP II)

Project	*Task Manager/Leader*	*Division Chief/ Sector Director*	*Country Director*
Appraisal	Satish Kumar	Sushma Ganguly	James Adams
Completion	Mohammed Sharif	Karen Brooks	Judy O'Connor

Preface

This report includes the Project Performance Assessment Reports (PPARs) for three closed Tanzania agriculture sector projects: the Agricultural Sector Management Project (ASMP) (Credit-2537) approved 20 July, 1993 and closed 30 June, 2001; the Second Agricultural Research Project (TARP II) (Credit-3036) approved 29 January, 1998 and closed 30 June 2004; and the National Agricultural Extension Project II (NAEP II) (Credit-2899) approved 11 July, 1996 and closed 31 December 2003. The report also adds a broader review of Bank support for the agriculture sector in Tanzania since FY 1991 based largely on a desk review of documents, although some of the field work for the project assessments was able to cover limited aspects of the field performance of other interventions. Both the project assessments and the sector review were undertaken as building blocks for an ongoing evaluation of Bank support to agriculture in Africa.

The report was prepared by the Independent Evaluation Group (IEG). It was based on the project completion and appraisal reports, the Development Credit Agreements, a review of Bank files, and discussions with beneficiaries, Bank staff, government officials, non-governmental organizations, institutions including universities, donors, and private sector managers. The cooperation and assistance of all stakeholders and government officials is gratefully acknowledged as is the support of the World Bank Country Office in Tanzania.

The report format covers each project separately, covering implementation and IEG ratings and then it reviews the sector as a whole. However, it aggregates the lessons from the projects and the broader sector assessment into a single section. Following standard IEG procedure, copies of the draft PPAR were sent to the government for their review and comments. Borrower comments on TARP II and NAEP II are included in Annex C. No comments were received on ASMP.

Summary

This report assesses the performance of three closed Tanzania agriculture sector projects, the Agricultural Sector Management Project (ASMP) (Credit-2537) closed 30 June, 2001, the Second Agricultural Research Project (TARP II) (Credit-3036) closed 30 June 2004, and the National Agricultural Extension Project II (NAEP II) (Credit-2899) closed 31 December 2003. The report also includes a review of Bank support for the agriculture sector in Tanzania since FY 1991 drawing predominantly on a desk review of other projects and sector work.

With respect to the three projects, the assessment reveals mixed performance overall. The outcome of the *Agricultural Sector Management Project (ASMP)* is rated moderately satisfactory. While the support for divestiture and the reform of the ministry were potentially very important for sector efficiency, there was limited focus on development ends as opposed to means in terms of the impact of changed services on rural households. The reforms were treated too much in project design as ends in themselves. Risk to development outcomes is rated modest and both Bank and Borrower performance is rated satisfactory.

The outcome of the *Second Agricultural Research Project (TARP II)* is rated moderately unsatisfactory mainly on the grounds that the evidence suggests only modest efficiency in a project in which efficiency was a key objective. Furthermore, there are concerns about the achievement of institutional objectives since a number of the promising processes put in place by this research project are now largely abandoned due to the lack of budget resources. It is difficult to define such fragile reform as lasting institutional development. Risk to development outcomes is rated high, Bank performance is rated moderately satisfactory and Borrower performance is rated moderately unsatisfactory.

The outcome of the *National Agricultural Extension Project II (NAEP II)* is rated unsatisfactory due to modest relevance, efficacy and efficiency. The project design was unprepared for the decentralization shift and the Bank reacted slowly even after it happened. The impact evidence from M&E is of very questionable quality, has limited comparison with controls and therefore offers little evidence of attribution. Most observers reported to the mission that public extension has deteriorated over the last decade with only a few localized private or public/private activities to fill the gap in some locations. The additional project objective, added at mid-term but not formally approved by the Board, of strengthening institutional capacity at the local government level, shows only modest achievement at this point. Some training was achieved at the time and some pilot systems were tested, and in some districts the Participatory Agricultural Development and Empowerment Project (PADEP) project is sustaining some activities for a little longer. However, most extension staff have negligible operating funds, and there are few incentives to perform. Decentralization is only partly achieved, with extension funds coming entirely from the center but responsibility located with the district. Morale is low and there is confusion about how promotions are to be determined. Risk to development outcomes is rated high, and both Bank and Borrower performance are rated unsatisfactory.

With respect to the sector as a whole, over the review period from FY 1991 to the present, the Bank has made an important contribution in the sector to both policy and investment. However, there have been both positive and less positive aspects in the Bank's performance. Some lack of analytical rigor in the translation of CAS strategies into actual lending programs has been an issue but the Bank played a generally positive role in supporting policy and institutional reform related to agriculture. This appears to have been achieved with quite strong borrower ownership. However, as noted above, the divestiture of parastatals was seen too much as an end in itself rather than as a route to improved services for rural households. It is probable that somewhat less of a "Big Bang" approach would have

given better results at the farm level, with more attention to private sector capacity analysis and capacity building and public/private partnership. In the area of technology development and dissemination there were two main weaknesses. First, as noted, partly as a result of incomplete decentralization, extension remains in a poor state outside some useful localized pilots. Second, while agricultural research is in better shape than extension, the donor push towards client-oriented adaptive research and immediate impact has left insufficient focus on sustaining the essential base of longer-term applied or strategic research that also should draw on strong support from a regional approach. Unless corrected, this will gradually starve the adaptive research program. An example of an area warranting more, and more sustained, research support is nitrogen efficiency and soil health given the high cost of inorganic fertilizer and the recent reversion to subsidies.

More recently, the Bank's efforts to work more closely with the government and other donors in the sector is seen favorably by these stakeholders. Sustainability remains the biggest concern in sector interventions. There has been insufficient attention to matching the scale of public sector activity to realistically projected resources. The evidence of the last decade would suggest that both the research and extension services are beyond the government's capacity to fund at their current scale. It is very doubtful that privatization and cost recovery in extension services will provide sufficient supplementation for real poverty alleviation impact except in a few localized situations. Finally, the new approach to basket funding, while offering a number of potential advantages in terms of efficiency of Bank and donor management costs, carries significant implementation risks. The appraisal documents offer limited analysis of government institutional capacity at different levels to handle this much more demanding approach. Moreover, it is not entirely clear how this approach would address the long-standing and fundamental problem of financial sustainability beyond perhaps reducing the gaps in donor support.

Five main lessons are drawn from both the project assessments and the sector review.

- There needs to be an explicit logical link between the strategic and sectoral goals of the Country Assistance Strategy (CAS) and the proposed lending program.
- Institutional capacity analysis could be strengthened and broadened and chronic problems that persist in a sector over long periods of time should result in more analytical work by the Bank.
- In policy research, there needs to be a balance between shorter-term client-oriented adaptive research and longer-term core applied research and this needs to be embedded in a regional approach.
- The Bank needs to be more realistic in projecting timescales for agricultural reforms.
- The Bank and the borrowers should be more realistic about the likelihood of funds saved from the down-sizing of a public institution being applied to future operating costs.

Ajay Chhibber
Acting Director-General
Evaluation

1. Background

1.1 Tanzania currently has a per capita income of about $280. In 2002 the overall GDP growth rate of the Tanzanian economy was estimated at about 6 percent. Agriculture accounts for about 45 percent of GDP with industry providing 16 percent and services 39 percent. Since 1990, agriculture growth has been reasonably steady at about 3.5 percent although it has been higher in the last few years, rising to over 5 percent over the more recent five year moving averages. Tanzania is self-sufficient in food grains during an average year and even in a year with uneven or less than normal rainfall. In better years Tanzania exports maize, beans and other food crops to neighbors (mainly Kenya and Zambia), notwithstanding laws intended to keep food grains in the country. Due to variable rains and other factors there may be as many as a million families who barely meet basic food requirements. However, recent data suggest that the incidence of wasting is down to 6 percent across both rural and urban areas, but stunting is still widespread with no downward trend in rural areas

1.2 Total land area is about 95 million hectares with about 44 million classified as arable and 50 million as rangeland. Cropped land area is about 9.5 million hectares, about 22 percent of the arable land. In aggregate, therefore, there are large areas of spare land. However, accessibility is often poor. The area of land utilized per household has increased substantially from about 0.7 ha per household in 1993/94 to about 2.0 hectares in 2002/03 but the rate of increase has leveled off since 1998/99. This suggests that there remains substantial surplus land but that this frontier is now being approached probably due to accessibility. The average yields of all three major cereal crops (maize, paddy and sorghum) have declined since 1986 by over 40 percent (taking 4 year period averages). The reasons appear to be partly due to recent droughts, partly loss of fertilizer subsidies, partly extension of area to less favorable land, and probably also the shortage of labor to cultivate the larger land area. The decline does not appear to provide strong evidence of significant yield impact from new technologies in cereals even allowing for a decline in soil health from reduced fallow and loss of inputs. The percentage of households using inorganic fertilizer declined from about 23 percent in 1994 to about 9 percent in 2003. Most of this reduction was from 1994 to 1998. About 77 percent of annual crops are planted without fertilizer, but, rainfall is still a bigger factor in maize yields than fertilizer.

1.3 However, while land productivity overall has stagnated or risen slightly, based on data provided by regional staff labor productivity appears to have grown quite well, probably partly due to shifts towards higher value commodities (Table 1) and partly due to a significant extension in land area into more marginal areas but also into some better areas of in-migration such as Ruvuma helped by increased oxen use.

Table 1. Tanzania: Key Sector Performance Indicators.

5 Year Moving Average	2000	2001	2002	2003	2004	2005	2006
Ag GDP Growth	3.1%	3.5%	4.0%	4.4%	4.8%	5.2%	5.3%
Land productivity growth	2.6%	4.0%	3.4%	5.7%	2.2%	3.3%	
Labor productivity growth	1.2%	1.7%	2.2%	2.7%	3.1%		

Source: Bank regional staff and Bank databases

1.4 Credit is not widely available or used. Data on credit use is limited. About 1 percent of farm implements are purchased with bank credit. In one survey (NAEP II Impact Survey undertaken by government under the project with technical assistance) about 18 percent of respondents were members of some form of credit group and, of those, about 10 percent had received a loan more than once which would imply less than 2 percent receiving credit nationally from an institution or group. However, even this may be a sample that is biased upwards. Market access is limited. Apart from the very large percentage of households (87 percent) who do not market because they have no surplus, the main marketing problems are reported by farmers to be (in order): market too far; transport too costly; no transport; no buyer; no market information; and problems with market union, association or commodity board.

1.5 Population growth rate is currently running at about 2.6 percent. Notwithstanding an improved economic growth rate over recent years, Tanzania has struggled to make inroads on poverty. Growth has tended to be in sectors to which the poor have few links. The literature even refers to a "Tanzania Factor" since the growth elasticity for headcount poverty seems to be lower than in several other African countries (Danielson 2004). Maize prices in Tanzania are affected by demand in neighboring countries, particularly Kenya. After maize the most important contributors to GDP are paddy, bananas, beans, sorghum/millet, and cassava. About 168,000 ha are under irrigation, only 1.8 percent of the total cropped area. The cash crops represent important exports for Tanzania but remain relatively small percentages of total agriculture GDP with tobacco and cotton at about 2 percent each, cashew nuts and coffee at a little over 1 percent, and tea at about 0.5 percent. While there are many problems with Tanzanian agricultural statistics, food crop production appears to have grown so far at about the rate of population growth and accounts for about 65 percent of agricultural GDP. However with less scope for expansion of cultivable land in the future and declining or stagnant yields for major food crops, food crop production may struggle to keep pace with population growth in the future unless yields can be raised (Table 2) or cultivated area can be further and efficiently extended without negative impact on land resources.

Table 2. Cropped Hectares and Yields of Selected Crops (Mainland plus Zanzibar)

Crop	*Hectares (main season)*	*Yield (t/ha)*
Maize (long season)	2,0004,388	0.73
Paddy	540,027	0.95
Sorghum	173,174	0.44
Wheat	31,224	0.75
Cassava	854,132	2.41
Cotton	226,905	0.51
Beans	486,466	0.43
Groundnuts	310,231	0.45
Coffee	193,398	1.55
Tea	17,622	5.05
Source: 2002/3 National Sample Census of Agriculture		

1.6 **Land Tenure**. The land tenure laws in Tanzania are based on the Land Ordinance of 1923 which has three elements (Dejene et al 1997): (i) all land is public land; (ii) power of

administration is vested in the President; (iii) right of occupancy, whether granted or deemed, is the primary mode of access and use of land. The majority of subsistence farmers hold land under the "deemed" right of occupancy and operate within a customary tenure system. While at one time this was criticized for giving insufficient land security, a number of more recent studies have suggested that this system is secure enough as an incentive for investment and can be held in perpetuity. However, it does not bestow title which can be used as security for borrowing. With intensification and commercialization this may become an increasing constraint unless group forms of security can be established.

1.7 There have been shocks in the past which impacted on land owner expectations. During the ujamaa villagization program of the mid 1970s many farmers were forced to use alternative assigned plots on village block farm areas and also to follow party-dictated rotations. Investment and productivity fell. The majority of farmers are now reported to be back to their original land holdings. Surveys suggest that, even now, there are some farmers who do not feel secure about their tenure. But generally these are farmers in areas with surplus land and an influx of land-grabbing new settlers who seize spare land without the knowledge of the village and local authorities. However, the main land conflict is between agriculturalists and pastoralists over grazing rights and the destruction of crops by livestock. The 1995 National Land Policy was largely aimed at reducing such conflicts. The expansion of agricultural land has been estimated at 2.5 percent per annum, close to the estimated rural population growth rate. The expansion of agricultural land often threatens traditional pastoral areas, particularly dry season grazing locations. Recently, a number of government dictates have halted pastoral grazing in areas traditionally used for livestock which has caused problems and resentment. Community solutions under such circumstances are often difficult because the agriculturalists and pastoralists come from different tribal origins and the latter may be transhumant, bringing livestock on traditional migration routes from distant locations. Briefly, therefore, while insecurity of tenure for agriculturalists was not generally seen as a major issue in the past, land tenure issues related to the need for credit collateral and conflicts between agriculturalists and pastoralists can be expected to increase unless participatory approaches to conflict resolution can be more widely developed and programs to support agriculture better understand pastoral grazing needs.[1] Holding a title is likely to become more important with intensification. Land tenure issues are noted in the government's Letter of Sector Policy associated with the new Agricultural Sector Development Project (FY06) and the project may provide some support for the strategy in this area.

1.8 **Reform Phases and Donor Relations.** The reform program and relations with donors have been a somewhat rocky road since 1990. Briefly, from about 1986 to 1992 there was an initial spurt of reforms and an aid boom (the earlier aid boom being in the 1970s) (Bigsten et al 2000). From about 1993 to 1995 reforms ran off track, fiscal policy went out of control and many observers found tax evasion and corruption to be rampant. Government

1. The exchange issues are often complex. On the one hand, the feed value of post-harvest crop residue is generally better than the natural forage it replaced so that visiting pastoralists with grazing arrangements with agriculturalists can benefit. On the other hand, there may often be a permanent loss to the pastoralist of a valuable prior grazing right, frequently in a dry season grazing location, with no long-term compensation arrangement.

revenue fell. Donors expressed major concerns. From about 1996 to 1999 the reform movement was back on track after a number of opposition parties had taken part in the first multi-party elections. The new Prime Minister gave high priority to fighting corruption. In April 2000 Tanzania was included in the HIPC initiative. Since 2001 the forward movement on policy and institutional reforms has continued but poverty levels still remain stubbornly high. Increasingly, civil society is contributing to policy debates, much within the framework of the Poverty Reduction Strategy Program preparations. During this period, decentralization was taken further but funding still remains predominantly from the center. There remain concerns within the private sector about the low efficiency of government and incentives for good civil servant performance are still very limited.

1.9 **The Three Projects Assessed.** Briefly, the three projects under review supported the reform of the central ministry serving agriculture and the associated activities of research and extension. The reform direction was towards: a focus on core services and the divestiture of many parastatals, including government owned farms; the improvement of the efficacy and efficiency of the agricultural research system and an increase in the accommodation of client feedback; and the improvement of the agricultural extension system including a trend away from the earlier rigid Training and Visit (T&V) system towards a more pluralistic and client responsive technology interaction service with a focus on poverty. Over the period of these projects there were two major institutional changes which had substantial impacts on these projects. First, the provision of public extension was decentralized so that administrative responsibility for extension came under the districts, although funding continued to come from the central ministries. Second, the Ministry of Agriculture (MOA) was split into essentially a crop and food security ministry and a livestock and water ministry, an arrangement that had existed before the three projects but had been abandoned. Part of the reason for the split was long-standing differences, found widely in Africa, between veterinarians and crop specialists.

2. Agricultural Sector Management Project

Objectives

2.1 The Staff Appraisal Report (SAR) stated the objectives as follows: "The overall objective of the proposed project is to strengthen institutional capacity to formulate and implement the government's agricultural development policies, strategies and programs. Specific objectives would include fostering institutional capacity to support: (i) the rationalization and strengthening of government functions in the agricultural sector; (ii) the formulation and implementation of agricultural policies; and (iii) the improvement of the agricultural information systems and services required to facilitate an effective functioning of the government and the private sector in a market-oriented economy."

2.2 The key elements of the government policy at the time included: phasing out the provision of services better done by the private sector; supporting the restructuring and privatization of agricultural parastatals spearheaded by the Parastatal Sector Reform Commission (PSRC); revising laws and regulations to provide an enabling environment for private sector investment in the agricultural sector; developing management systems and capacity required to improve the allocation and utilization of budgetary and manpower

resources, managing the functional rationalization and restructuring of MOA; improving the managerial skills of the decision makers in the Ministry; and strengthening the agricultural information systems and services that are important to supporting a market-oriented economy.

Project Design

2.3 The ASMP credit for US$24.5 million with a total project cost at appraisal estimated at US$27.2 million had three main components.

(a) **Rationalization of the Functions and Strengthening the Management Systems of MOA** (US$7.8 million planned, US$2.7 million actual).[2] To support the phasing out of about 48 already identified MOA functions related to services potentially better done by the private sector, the joint operation by MOA in partnership with the private sector of about 20 other functions; the privatization of about 80 agricultural parastatals; and strengthening MOA's capacity to manage the transition and better perform the remaining functions. ASMP was not expected to carry out these activities alone. Much of the divestiture was in the hands of the PSRC. ASMP was designed to support the process with studies, task forces, workshops, management, and training.

(b) **Policy Formulation and Implementation (US$7.1 million planned, US$14.5 million actual).** To support policy analysis and longer-term institutional strengthening. The policy analysis was to include preparation of sector policies for short and medium term policies and programs, improvement of policy coordination through support to strengthen the Policy Analysis and Advisory Committee, improved regulation and incentives and food security policy. There was to be support for a comprehensive staff training program backed by improved work environment and facilities.

(a) **Agricultural Information Services (US$10.8 million planned, US$3.8 million actual).** Focus on strengthening, rationalizing and expanding the agricultural sector information base. Priority was to be given to supporting the country's capacity to produce reliable information at the national, regional and district levels. Emphasis was to be on strengthening institutional capacity for training analysis and dissemination of information. The component included a national sample census, subsequent surveys to provide data for planning on an annual basis, a pilot survey in one of the cash crops to explore alternative methodologies, providing the Crop Monitoring Early Warning System with equipment, improving data collection at the district level, and improving communications equipment for better marketing and trade information.

2.4 **Extension.** The project closed 2 years later than planned mainly due to the initial delay in the approval of the organizational structure of MOA but also, partly, the slower than expected achievement with the reforms. The projections were clearly unrealistic given the series of approvals and actions known to be needed.

---

2. The main reasons for differences between planned and actual expenditure (which were largely productive shifts) were: (1) overestimates of the costs of ministry reform needs and (2) the costs for the intended activities being allocated to different components due to component overlap.

Appraisal and Quality at Entry

2.5 Project design was not assessed by the Bank's Quality Assurance Group. The completion report rates the quality at entry as Satisfactory. However, this assessment finds weaknesses in design at entry since it focused excessively on the inputs and outputs as opposed to the outcomes and impacts of the reforms. The Bank and borrower strategy was not simply to privatize for the sake of it. It was to privatize *in order to* achieve improved support system efficiencies. There was excessive focus on identifying what were "core" and "non-core" activities. While classifying activities in this way was not without value, the more important issue was to identify what were suitable "core" activities for the public sector *given the capacities of the non-public sector.*

Implementation

2.6 In this section, the discussion of implementation is disaggregated by component. With respect to the component for *rationalization of the ministry*, a new ministry organizational structure was developed. A staff inventory and staffing plan was completed and 7,800 staff were retrenched with 7,900 being redeployed to the regional and local governments. About 85 percent of the original non-core functions were either privatized or shifted into joint ventures. Guidelines were developed for the formation of joint ventures. The project assisted the PSRC in determining suitable divestiture strategies and contributed to the preparation of 177 profiles for agricultural parastatals slated for divestiture which was above the target. Cost-sharing arrangements with the commodity boards for the main export crops were agreed. As a part of an on-going process, some research activities for export crops (e.g. tea and tobacco) were privatized. The design and implementation of improved internal operating systems and MIS was completed and electronic connectivity through local networks established within the MOA.

2.7 While these changes were potentially far-reaching, there is little evidence that they led to the hoped for more effective ministry. The appraisal report anticipated that the savings from the rationalization would finance incremental recurrent costs, but the agriculture ministries appear just as short of operating funds now as they were prior to the project. Particularly in Africa, there has been long experience in Bank-supported reform of Treasuries taking back savings from down-sized ministries. Funding tends to be closely related to staff numbers.[3]

2.8 About 80 percent of the ICR Annex list of 101 enterprises (including farms, estates, and ranches, processing factories including ginneries, storage facilities, milling facilities, engineering facilities, blenders and packers) have now been privatized, although a number of these occurred after the project closed. The majority is reported to be functioning reasonably efficiently but the impact at farm level is unclear. There remain a number of problems including: farms taken over by private buyers who do not have the capacity to invest and

3. For example, in Kenya, when the Forest Department was reformed under the Forestry Development Project, staff had expected the savings to go at least partly towards an increase in operating funds. It never happened. OED (now IEG), in its assessment of that project noted then that the Bank's and borrower's expectations had been naïve.

farm them efficiently,[4] farms previously performing important sector services such as seed production which have lost capacity or shifted to other enterprises, farms which were intended to be privatized but then were retained on questionable grounds,[5] and outdated processing factories of limited value to new owners.

2.9 With respect to the component for *strengthening institutional capacity*, the evidence suggests a substantial and generally worthwhile training input by the project. Against a total appraisal target of 70, 23 staff received long-term overseas training and 53 received short term overseas training, fully meeting the appraisal target. A total of 155 staff participated in various workshops on topics such as research methodology, report writing, commodity policy review, policy planning, and macro policies. There was also a program of on-the-job training (OJT) and personal service contracts/special service assignments in which staff were provided with mentors, usually from a university. The project supported 18 major policy studies. While there were some losses of trained staff to retirement, the private sector, and NGOs supporting agriculture, ministry staff report that the majority of those trained are still with the ministry. The project also assisted in the establishment of a Tanzania Chamber of Agriculture and Livestock as an apex organization for industry-based agricultural associations such as the cotton, cashew, tobacco, sisal and coffee growers associations.

2.10 With respect to the *agriculture information systems and services component*, there was a useful pooling of staff and resources between the Agricultural Statistical Unit of MOA and the National Bureau of Statistics. This collaborative arrangement has continued although, since the project closed, funding has again become a major constraint. The Statistical Unit developed an agricultural database system and also strengthened market information and monitoring activities. In addition, the Early Warning System related to food security was strengthened. However, again, this is struggling due to lack of resources.

Monitoring and Evaluation

2.11 With respect to *monitoring*, at this distance, more than five years after the project closed, it is very difficult to assess the quality. There is some evidence that it was satisfactory since there is reasonably adequate information on the stage of privatization of the various entities being divested and the records on the training component appear satisfactory. The files offer some evidence in progress reports that suggest the main component indicators were being monitored at the time. There is an adequate record of the large numbers of studies

4. The lack of business skills and financial capacity in many privatized entities and businesses could have been less of a problem if there had been a more measured phasing of the divestiture, as is being done in Vietnam (see later sector discussion).

5. For example, the government-owned livestock ranch near Mwanza, visited by the mission, is over 9,000 hectares, a huge area for that fairly high population density area, yet it only produces 300 heifers per year to sell at what is claimed to be, but may not be, a subsidized cost to farmers. While operating costs at this ranch are carried by sales revenue, salaries and all capital equipment and vehicles are paid for by the government budget. While the mission did not have the time to do any financial analysis on this, as it stands, it is clearly a hugely inefficient drain on the government budget. It was reported by the staff in post that it is planned to use it for training and that the livestock research staff will move there as the split between crop and livestock research is consolidated. This appears to be more a supply-driven response to a spare resource than a component in a demand-driven rationalization program.

that were completed. In addition, the record of staff numbers over the period of retrenchment provides evidence by grade and location. However, with respect to *evaluation*, there was little evidence available of the impact of the divestiture and ministry reorganization on clients and this is given high weighting in this M&E assessment. It is both a design and implementation problem, although predominantly the former, and reflects on quality at entry. Overall therefore, it is concluded that M&E *design* was unsatisfactory, that M&E *implementation* was unsatisfactory, but that M&E *utilization* (of what limited evidence did become available) was generally satisfactory.

Performance Ratings

OUTCOME

2.12 Outcome is rated *moderately satisfactory* on the grounds of *substantial* relevance, *modest* efficacy and *substantial* efficiency. The project did contribute to a hugely important shift in public sector strategy towards a reduction in the very costly government role in servicing agriculture through often highly inefficient parastatal enterprises. Nevertheless, there were significant weaknesses.

RELEVANCE

2.13 Overall relevance is rated *substantial,* although there were several weaknesses. The relevance of the objectives and the relevance of the design are considered. The relevance of the *objectives*, which were essentially to strengthen institutional capacity to formulate policies in support of the overall divestiture program, is rated, on balance, substantial. The divestiture strategy was a high priority to reduce the burden of parastatals on the economy and to improve service performance, particularly in marketing. This aspect is given high weight in the rating. Nevertheless, the aim to focus the ministry and retain only core activities in MOA and to support the divestiture was not the whole of the relevance story. The issue was not merely what activities could be best carried out by the central ministry(s), it was also what activities could be best carried out by the private sector, by partnerships, or by more independent commodity organizations, given the capacity of these alternative service mechanisms at the time. Nevertheless, the overwhelming importance of addressing the problems of inefficient, loss-making public entities is the main rating determinant of a substantial rating in this case. The *design* also did not adequately address the importance of ensuring impact of services at the farmer level, particularly on the poor. It should have focused more on the development *ends*. This contributed to the limited attention to providing support for privatized enterprises and services the need for which was eventually appreciated at the mid-term, but too late for much impact.

EFFICACY

2.14 On balance, efficacy in achieving the objectives is rated only *modest*. With respect to the *rationalization and strengthening of government functions*, while the support for divestiture in terms of studies and guidelines was largely achieved, albeit more slowly than planned, there remain questions about the extent to which government core functions were really strengthened in a sustainable manner because, following the downsizing, resources were also downsized accordingly, making it very difficult for the leaner ministry to perform any better in the core business that it retained. While this is difficult to assess quantitatively,

few stakeholders spoken to by the mission, either within the public sector or outside it, had observed much change in the capacity of the ministry to service the sector and address the priority issues. Furthermore, the creation of a separate livestock ministry has almost certainly undone a lot of any efficacy and efficiency gain by doubling management overheads and by splitting crop and livestock research institutes when the opposite, rationalization, was needed. It has also led to loss of farm systems intervention coordination. The Bank's Africa Region has argued that the rationalization element of the objective should be given more weight. However, the fact that the overarching statement in the objectives was "to strengthen institutional capacity to formulate and implement the government's agricultural development policies, strategies and programs" suggests that the predominant weight should be on the institutional performance. Moreover, the rationalization was subsequently substantially negated by the split into the two ministries. It is also difficult to assess at this project evaluation level the benefits of any released funds elsewhere in the economy. It is concluded that this element of the objectives warrants a *modest* rating.

2.15 With respect to *developing government policies*, some significant output is evident over the project period. There were 18 major studies completed under the project (see ICR Annex 7B for list). These included, among others, the medium-term sector development strategy, the agricultural and livestock policy, an agricultural input supply strategy, two papers on taxation in the agriculture sector, a review of the legal framework for the sector, a study on food security in Tanzania, and a public expenditure review. While the impact of these studies on government decision-making is not easy to assess given the wide array of factors supporting policy change, the majority of these studies were clearly relevant and, based on discussions with stakeholders in the sector, appear to have made contributions to a number of the reform decisions. This element of the objectives warrants a *substantial* rating.

2.16 With respect to *improving information systems* (to which we attribute a somewhat lower weighting than the other two objectives) the issue of sustainability cannot be discounted when an objective calls for an improved "system". While over the period of the project, there is evidence of some quite significant information achievements, such as the agricultural census reported on earlier, but, as with so many investments, the capacity to sustain these systems has since declined. The information systems appear somewhat better than before the project but given the sustainability concern it is difficult to justify rating it more than *modest* in terms of *system* improvement.

EFFICIENCY

2.17 Though efficiency is difficult to assess in such a project it is rated *substantial* largely on the basis of a qualitative judgment. No economic analysis was done and it would be unreasonable to expect such an analysis with such a diverse array of activities and, by design, only a contributory attribution. Notwithstanding the concerns expressed earlier about the excessive focus on means rather than ends, it is clear that the divestiture process itself offered substantial cost savings to government and that the role of the ministry in this was catalytic for the overall program of the PRSC.

2.18 With respect to the subsequent efficiency of the entities divested, many government owned farms, processing factories, and marketing agencies were highly inefficient before the reforms. However, the efficiency estimation of these activities cannot be assessed simply as

savings of losses to the government exchequer. The efficiency question for the economy of Tanzania is how the national cost and benefit streams across the economy shifted with the project-induced institutional changes. While there is insufficient evidence to assess this across all the individual divested entities, it is possible to use some particular cases and broader anecdotal evidence to piece together a partial picture.

2.19 With respect to marketing divestiture, overall, efficiency appears to have improved. The mission focused particularly on cotton, coffee, and maize. The majority of farmers and stakeholders who were interviewed believed that there have been improvements in performance. Positive responses by farmers are significant because, for a number of export crops, global prices have declined considerably over the period of assessment.[6] The few studies available, some by the World Bank, generally confirm the positive change in marketing. For example, Baffes (2005) found that during the six seasons prior to the reforms the average grower's share was 41 percent of the cotton export price whereas in the six seasons after the reform the share was 51 percent. Moreover, payments were made more promptly. Prior to the reforms growers often had to wait as long as two years for payments over a period when inflation was running at over 20 percent. In the broader institutional development sense, the "Rules of the Game" in Tanzania have changed substantially in a positive direction over the last decade and this project can claim to have partially contributed. Farmers can now sell to a reasonably competitive range of buyers. In general, undesirable market manipulation by commanding new players, as has sometimes happened in other countries such as Malawi, has not been widespread. Clearly, Tanzania could not continue carrying large numbers of mostly inefficient loss-making parastatals with weak public goods rationale. Rationalization was necessary and was achieved, albeit perhaps too hastily in some cases. Also on the positive side, the project in question enhanced skills. The reforms also meant that the government was no longer subsidizing inputs. This led to a rise in input costs which was bad for the farmer but good for the government budget. Fertilizer use declined. In the post reform period there was only a moderate increase in cotton production and some decline in quality probably due to the reduced fertilizer application.

2.20 With respect to government-owned farms, the picture is less clear since it appears that a number of farms that were privatized have not been efficiently operated. On the other hand, many of those retained are inefficiently used also, one visited by the mission grossly so. With respect to particular types of processing, there have been some problems because processing technologies at the time of sale were out of date, for example in cashew factories. With respect to privatized estates such as tea and sisal, the story is so far mixed, but there is some reason to believe that the private owners will perform more efficiently over the long term.

2.21 The efficiency of the training activities appears to have been satisfactory, targets were largely met within the budget and the majority of those trained remained in their service.

2.22 With respect to the efficiency of the ministries, in particular agriculture and livestock, as noted earlier, the majority of people interviewed who had experienced some interaction

6. For example, the world cotton price in 2002 was about half the price it was in 1996. Arabica coffee in 2002 was about one third the price of 1996. Cashews in 2002 were about 60 percent of the price in 1996. Tobacco, sisal and pyrethrum prices were also down over that period.

with the MOA before and since the reforms have not noticed any obvious efficiency improvements in the quality of the services provided. It is difficult to make the same comparison with livestock which was a smaller share of the previous unified ministry. A further aspect of efficiency is related to the splitting of the ministries. The mission came across evidence of the inefficiencies of this change. For example, livestock research at Ukiriguru and at Selian zonal research stations, which had been quite well integrated with crop research for some years, is now in the process of splitting off notwithstanding earlier commitments during the time of the project that crop and livestock research would remain integrated. Livestock researchers are about to move out of the research stations to develop new livestock centers nearby. This is plainly inefficient both on the cost and benefit side, particularly since the evidence suggests that even the current stock of research institutions is well beyond government's capacity to sustain.

2.23 Weighing all the above aspects, on balance, but giving substantial weight to the very far-reaching efficiency impact of the institutional reforms in marketing supported by the relatively modest investments under this project, there is a case for a substantial rating for efficiency on overall cost-effectiveness grounds.

Risk To Development Outcome

2.24 Risk to development outcome is rated *modest.*[7] The downsizing of the ministry and the divestiture of the non-core activities would be almost impossible to reverse. This leaves the question of the development risk in the divested institutions and the ability of these to service the poor. With respect to the marketing activities, which for scale of economic impact should be given the greatest weight, while one should expect a continuing evolution with greater competition within the private sector, most of the industries appear to be relatively well established and capable of further enhancing services to farmers. However, in commodities such as coffee, weak long-term price prospects will call for continued gains in industry efficiency if it is to compete with countries like Brazil and Vietnam. With respect to divested farms and some processing such as cashew, the picture is less clear. Some farms appear to be struggling and therefore are likely to change hands and shift products before stability and profitability is attained. The risk to the continued provision of services to the poor is more difficult to assess. There is not yet much impact evidence.

Bank Performance

2.25 Bank Performance is, on balance, rated *satisfactory*, based on an overall satisfactory rating for entry and supervision, although on quality at entry there was a significant issue. The lack of focus in project design on the impact of the reforms at the beneficiary level was a significant weakness. However, this is outweighed by other positive design performance

7. The Region has argued that there is a disconnect between the rating outcome of moderately satisfactory and risk to development of only modest and also that the appropriate indicator for the performance of the privatizations should not be the performance of former SOEs but the overall market efficiency created by the reforms. While there is some validity in these points, IEG argues that the outcome rating is an aggregation of the relevance, efficacy and efficiency ratings and that, partly for the reasons given by the Region, efficiency was indeed rated substantial with relevance substantial but that efficacy, based on the weighted achievement of the objectives, remains modest. IEG also argues that relevance actually still had significant weaknesses since, as noted, there was no attempt in either objectives, design or M&E to assess the outcome in terms of what happened to potential beneficiaries. The project design treated the reforms too much as an end in themselves.

aspects in this very important and difficult area of parastatal reform. Borrower staff felt that the Bank had brought wide global experience on the issues facing Tanzania and had not imposed its views. Quality of supervision was generally satisfactory and was favorably commented on by the borrower. Documentation was generally satisfactory. The ICR praises the Bank supervision missions for being proactive in raising the disbursement percentage of IDA funds and thus reducing the problem with counterpart funds, however it is not entirely clear that this was positive for the longer term. Essentially, it temporarily bought (as opposed to brought) the project out of a financial sustainability problem which needed to be faced and addressed at a deeper level.

BORROWER PERFORMANCE

2.26 Borrower performance, on balance, is also rated *satisfactory* although there were some performance issues. The MOA itself appears to have performed well under quite difficult and uncertain circumstances with many staff posts in jeopardy. There was a strong project preparation team from the government side and a series of important preparation and opening workshops. Moreover, as noted in the ICR, financial management and procurement for the project were both rated high by Bank specialists. The borrower's program of divestiture is partly attributable to the project although supported over time by a number of interventions. However, there were some counterpart funding problems and again, the decision to split the ministries negated some of the positive aspects of borrower performance.

3. Second Agricultural Research Project

Objectives

3.1 The project objective at appraisal was stated as follows: "to support the generation of technology to increase efficiency and productivity of crop and livestock production systems with sustainable use of natural resources, focusing on the needs of the smallholder sector." Also stated in the objectives section was the following list of subsidiary elements: that the project would continue to support the institutional development of the national agricultural research system, assist in decentralizing financial resource management, support privatization of research as appropriate, emphasize client-oriented adaptive research, strengthen extension/research linkages, emphasize a farming systems research approach, improve research planning, and assist in human resource development.

3.2 At mid-term, the objective was somewhat expanded to reflect an increased institutional development emphasis. At this point, the objective became: "to increase the efficiency and productivity of crops and livestock production systems focusing on the smallholder sector and institutional strengthening." While this did not significantly change the aim it added a signal about the means. Interestingly, the additional language was simply tacked on the end which seems to have allowed it to be treated as an insufficiently substantial change to require seeking further Board approval. Since there was no formal restructuring, the project is assessed against the original objectives. However, institutional strengthening clearly was a means to these higher level objectives. This adjustment of objectives, appropriately, led to greater focus on the financial and management devolution to the Zonal Research Coordinators, the pursuit of greater private funding for agricultural research, and

the strengthening of the capacity of the central Department of Research and Development to improve research planning, M&E and human resource development. But, particularly for M&E, it was too late.

Project Design

3.3 Total project cost was US$22.98 million with an IDA funding of US$21.75 million. A number of bilaterals committed parallel support totaling US$23.10 million. The bilaterals were: Netherlands, UK (DFID), Germany (GTZ), Sweden (SIDA), European Union, Ireland (Irish Aid), Norway (NORAD), and Denmark (DANIDA). There were three project components.

(a) **Institutional Development** (US$2.9 million planned, US$3.1 million actual) was focused on decentralization and greater management and financial empowerment to zonal stations, redefinition of the roles of the central department, the National Agricultural Research Council, and the Zonal Research Stations, establishment of a zonal executive committee, a phased downsizing of the research establishment, privatization of research, improved research/extension/farmer linkages, consultant costs, improved financial management systems, operational costs and project monitoring and evaluation.

(b) **Research Programs.** (US$8.5 million planned, US$8.1 million actual) were focused on supporting research programs, mainstreaming of the Sokoine University of Agriculture (SUA) into national agricultural research, the establishment of zonal research funds, continued support to the ongoing national Agricultural Research Fund, operating costs for research programs, some strengthening of research infrastructure at SUA, guidelines for operating the agricultural research funds, and irrigation facilities for research farms.

(c) **Resource Development and Management.** (US$11.5 million planned, US$11.6 million actual) was focused on the development of human resources, research infrastructure, improving support services, assistance to SUA for training programs, consultant and technical assistance services, selective rehabilitation of research stations, equipment and infrastructure, strengthening financial management, information and communications services, documentation and library services, and M&E. The project also supported training and strengthening of the central Department of Research and Training in MOA.

3.4 **Extension.** The project closed one year later than planned due to substantial delays in the first two years partly due to insufficient counterpart funds, but also due to slower than expected establishment of the institutional reforms, and slower disbursement and delayed and poor construction. But in the end disbursement was close to 100 percent of what was planned.

Appraisal and Quality at Entry

3.5 The project was not assessed for performance by the Quality Assurance Group. The quality at entry of the project is assessed by this report as only moderately satisfactory in accordance with the ICR assessment. The main weakness at appraisal was the limited focus

on the assessment of the impact of research and reflected in weak definition of indicators. This weakness later affected the evaluation of performance, although the Midterm Review (MTR) belatedly redirected attention to address this.

Implementation

3.6 Over the project period, the institutional framework for research was strengthened and a number of new technologies were generated with some dissemination, in particular in the area of improved varieties. There was a substantial increase in private sector funding for cash crop research particularly coffee and tea. This had become largely industry-financed although this now seems to be about to change with a recent government decision to ban the cesses for research and to make up the funding from the budget. (The reason for this decision appears to have been to avoid any possible constraints to exporting which the collection of a cess can impose). The extent to which the project research can claim to have contributed to the generally satisfactory, although not spectacular, agricultural GDP growth rates is difficult to assess but it is probable that the long-term Bank-funded support for agriculture research in Tanzania has been one factor in this achievement.

3.7 Looking at the individual components, with respect to the *institutional development component*, over the period of the project, greater devolution of financial and management authority in the development of the zonal research strategy was achieved for the Zonal Research Coordinators. Zonal Executive Committees were established with substantial representation from research users. In addition, the Zonal Technical Committees and Internal Program Review committees were established. The aim of all these institutional changes was to strengthen the interaction between researchers and stakeholders, make research more demand driven, and enhance strategic planning. MOUs were signed with the Zonal Research Centers and the Local Government Authorities (LGA) in an attempt to pull in additional funding. This appears to be optimistic, and arguably a design weakness at this stage of decentralization transition, since first, research, with its returns to scale and public good aspects, is not as well-suited to such local funding as many other investments; second, in any case, districts are currently collecting a very low percentage of total funds needed and there are many needs more suited to funding from local revenue; and third, extension has much greater justification for local funding support yet is getting almost zero from the districts at present.

3.8 There were a number of weaknesses. First, it is questionable whether these new institutional processes can really be defined as being "established" because, since the closing of the project, much of the coordination activity that had been established has ground to a halt due to lack of funds. Second, the MOUs with the LGAs, even if justified, have been of little practical value since the LGAs have had very few funds to pass on to research and, in any case, one would anticipate increased "free-riding" in future once LGAs realize how few other LGAs nationally have contributed. Resources are very limited, only about 10 percent of LGA budget is locally raised and a number of "nuisance taxes" and a development tax have been halted by national legislation which will reduce this. Third, farmer representation still tends to be dominated too much by progressive farmers. Fourth, there are concerns because of questions about sustainability. The evidence suggests that, yet again, research activities

build up and develop linkages with clients during the peak funding period of a project only to sink back down to a power-conserving, almost hibernation mode once the project closes.

3.9 With respect to impact evidence from clients, there was an impact study carried out for TARP II. However, unfortunately, it has many methodological weaknesses which make it of very limited value in outcome evaluation (See Box 1).

Box 1. Weaknesses in the Impact Study

Some of the main problems with the study (Tanzania Agricultural Research Project Phase Two (TARP II) - Survey Report of Farmers' Participating in On-Farm Research, May 2004) are the following: (i) The survey did not cover the full range of Tanzania farmers, only those who had actively collaborated or comparator non-collaborators in the same villages. (ii) Sampling was not random and allowed substantial freedom of selection to get a "theme mix". Drop-outs were treated differently in different places. (iii) There was little comparison with the baseline sample. The original intention was to compare the 2003 findings with earlier 1998 baselines partly utilizing the same sample. It is still not entirely clear to the mission why this was not done. (iv) There are a number of substantial anomalies between text and tables which raise questions about the validity of the data. (v) All the enumerators were researchers or were from the research department in the ministry and therefore had a stake in the outcome. (vi) The very limited analysis of the comparison between the collaborator and non-collaborator sample seems selective.

3.10 Given the problems enumerated in Box 1, there are questions about the validity of the findings. Notwithstanding these questions, some of the main findings were:

- 85 percent of respondents were "visited by extension workers". However, the highest percentage by Region was 17 percent (for the Southern Highlands) which suggests that the 85 percent is an error;
- The maize yield of collaborators averaged 1,636 kg per ha and of non-collaborators 1,290 kg per ha. (significant at the 5% level);
- 22 percent of collaborators and 22 percent of non-collaborators gave lack of knowledge as the main reason for not using improved seed (which suggests collaborators are not getting more information on varieties than non-collaborators);
- 22 percent of collaborators use oxen ploughing compared to 16 percent of non-collaborators (perhaps due to a collaborator selection bias since research is not involved widely with ox cultivation);
- 19 percent of collaborators used top dressing fertilizer (mostly urea) compared with 21 percent of non-collaborators (the report explains the negligible difference as possibly the result of parallel interventions targeting non-collaborators);
- 55 percent use improved maize varieties;
- Time spent by collaborators on on-farm trials averaged about 4 man-days.

3.11 With respect to the *Research Component*, over the project period, 37 improved varieties and 10 livestock innovations were disseminated, with at least some of the research for those technologies arising from project support. Of particular value have been the six new maize varieties including Quality Protein Maize and new rice and bean varieties. Some of the most important breeding/adaptation achievements were resistance to Grey Leaf Spot and Cassava Mosaic. There was also an important contribution in the production and dissemination of a thermostable (i.e. not requiring refrigeration) Newcastle Disease vaccine which was important for income and nutrition of poor households who often keep small numbers of highly vulnerable poultry. The approach followed was the Client Oriented Management Approach (CORMA) which evolved from the earlier Farm Systems Approach (FSA). CORMA aimed at building on two main factors: that research should be client oriented, and that management capacity should stay current and adapt to a rapidly changing competitive environment.

3.12 The IEG mission focused particularly on the Conservation Agriculture technology adaptive research since it appeared to be highly relevant and also a good case for the farm systems approach adopted. The achievements of this program have been impressive, although modest in scale. The work out of the Selian Research Center in Karatu District tested and adapted techniques with lablab (a legume *Dolichos lablab, Mucuna* has also been used) in maize in conjunction with zero tillage. The results appear very promising and possibly replicable throughout large parts of Tanzania. Some of this work came out of the Sasakawa-Global 2000 program but the project took it further and the work has since advanced. This technology is promising for the breadth of what it offers.[8] However, what seems to be missing in this adaptive program is the *background of strategic or applied research that lies behind this technology with potential to enhance it.* In this case, a number of aspects appear to need more work including: legume nodulation and optimization of nitrogen fixation, inoculation options, interactions with inorganic fertilizer, lime seed treatment, and the complex links to broader soil health work. (see Box 2).[9] This is a particular case of a more general finding. The swing towards adaptive client-driven research appears to have been excessive. All donors seem to have run to the same side of the ship at the same time. If the Bank has any dominant comparative advantage in this sector it is to

8. It offers nitrogen fixation, weed suppression, soil protection from rainfall impact and surface runoff, increased surface organic matter, phased nutrient release i.e. elements of integrated nutrient management, minimal soil disturbance at sowing and therefore reduced weed germination, maintenance of soil structure, and enhanced overall soil health, reduced cultivation labor, some shifting of labor into the slack period (e.g. post maize harvest lablab harvesting), supplementary fodder production, and risk mitigation through an intercropped two product system.

[9] One of the borrower comments (Annex C) is that the borrower fails to understand why the report says there has been little focus on legumes considering their role as fertilizers and on human nutrition. A total of 13 legume variety releases are cited. We acknowledge that a number of useful new legume varieties have, indeed, been released, but, as discussed above and in Box 2, the mission's concern was that there had been insufficient focus on the *strategy of nitrogen capture* for farming systems and the associated technologies of inoculation, husbandry and associated farm system and soil health issues. In other words, we are suggesting that, given the high N costs, a research program placing nitrogen capture and broader soil health as the central objective would achieve more for Tanzania agriculture as a whole than simply a program of legume variety breeding. (The Conservation Agriculture program is still quite small). Such a strategy as proposed would still yield improved varieties but with somewhat different selection criteria and support needs. The opportunity for improved N capture may now be enhanced over the opportunities a decade ago with recent biotechnology options.

maintain support balance and to ensure the maintenance of the core strategic research. Interestingly, the same finding emerges in the Kenya Second National Agriculture Research Project ICR (June 2004) coming from an external program review. A donor consultant spoken to in Tanzania held a similar view of the Tanzania program.

3.13 In relation to coordination, the PAD had correctly noted that, as a member of two sub-regional research organizations, the Southern African Center for Cooperation in Agricultural Research (SACCAR) and the Association for the Strengthening of Agricultural Research in Central and Southern Africa (ASARECA), Tanzania was well positioned to access technologies and adapt them, although it did not go any further into how that collaboration might be supported. Over the project period, however, collaboration with the CGIAR system and other outside research bodies and associations has been generally effective and increasingly wide-ranging. Over the last 15 years, there has been a burgeoning of networks and sub-networks. The constraint now for Tanzanian researchers is more in the financial resources for scientists to travel and to play their part in the collaboration than in the lack of organizational associations themselves.

3.14 Under the long-standing Special Program for African Agricultural Research (SPAAR) and under the later established basic principles within the Frameworks for Action (FFA), there has been important knowledge support for systems of accountability, staff deployment and programming. The project under review gave further management support, although the FFA master-planning itself was initiated some time prior to this project. More recently, FARA, the Forum for Agricultural Research in Africa has been established under SPAAR to complement national, international, and sub-regional work. It subsumed, with ISNAR's help, the SPAAR work in the transition to FARA (the FARA secretariat is hosted by FAO in Accra).[10] There are also a number of smaller, more targeted collaborations such as the African Conservation Tillage Network (ACT). The benefits of regional research collaboration are now better understood and exchange of information between countries is improved and, of course, facilitated by the increasing use of the internet, the latter again constrained by funding. It is very difficult to separate what was contributed by Bank projects and what came from the numerous collaborations, but the difficulty in attribution here would seem to be a good thing, implying adoption of processes widely agreed and supported by all players. There have been some weaknesses identified in these collaborations, for example, one study found weaknesses in addressing policy research under the FFA due to skills shortage in this area. However, by and large they have substantially enhanced the exchange of knowledge and Tanzania has been well at the forefront, hosting a number of key collaborative meetings. Links with the CGIAR system have remained strong.

3.15 At the research program level, one example of recent collaborative research is in the bean genetic improvement program with principal investigators at Bunda, Malawi; Sokoine University, Tanzania; USDA and Oregon State University and with Tanzanian collaborators

10. The founding members were the sub-regional organizations of ASARECA (Association for Strengthening Agricultural Research in East and Central Africa), CORAF/WECARD (Conseil Ouest Africain Pour la Recherche et le Developpement Agricole/West and Central Africa Council for Agricultural Research and Development, and SADC/FANR (Southern African Development Community/Food Agriculture and Natural Resource Department)

at Misangu, Uyole, and Selian research centers. The program collaborates with CIAT, ECABRN, and SABRN (the latter being the Eastern and Central and the Southern Africa Bean Research Networks). While some collaborations do bring in some funding, the funding is small relative to the government and major donor funding. The main purpose is enhancing efficacy, leveraging knowledge and improving efficiency, and reducing duplication of research. There are collaborations in many other areas including Conservation Agriculture (CA), for example, with support from ICRAF. There are also a number of training opportunities and information services and exchanges of findings offered by the collaborative organizations and information services.

3.16 Under the research component of TARP II, Zonal Agricultural Research Funds with management committees were established with a few contributions from district councils and from development partners and other sources and matching grants by the project. The funding response was variable by zone. Again, unfortunately, these funding "jars" are currently largely empty due to lack of contributions since the closure of the project.

3.17 With respect to the human *resources development and management component*, achievements were generally satisfactory. Targets for training at post-graduate level were either met or surpassed. The component also provided assistance to SUA for training, particularly on client-oriented and demand-driven research. It strengthened research/extension/farmer linkages through training in participatory research methodology. It also supported the exchange of experiences and developed a built-in M&E activity.

3.18 With respect to the selective *rehabilitation of research stations, equipment and infrastructure*, there were serious problems with the quality of construction due mainly to poor consulting engineer supervision. The mission looked at the quality of construction at both Selian and Ukiriguru Research Centers. In both cases, construction was highly unsatisfactory. It was not clear to the mission that all possible remedies for redress from the supervising engineers had been exhausted.

Box 2. A Case of Insufficient Applied Research Foundation for an Adaptive Program?

In the mission's view, the work combining legumes (e.g. *Dolichos lablab*) and maize with zero tillage is highly promising. Some useful work with farmer collaborators was seen in Karatu District. Due to the high cost of nitrogen, a central question for Tanzania is how to maximize nitrogen fixation. Key questions include: nodulation, and the possible need for inoculation, lime seed treatment, nodulation constraints in different soil types, soil acidity problems, interaction with N fertilizer, and other questions, such as the potential for GM varieties aimed at enhanced N efficiency. Such applied work to back up adaptive work is not going to emerge simply from client feedback and the associated adaptive trials. It will emerge from strategic thinking by skilled researchers with a good understanding of farming systems being given *sustained* funding support. There has been some scattered work in the past in different zones on nodulation and there is some useful work being done now in Kagera region with FAO support on soil health more broadly aimed at land management sustainability (which warrants wider support in other zones). But *maximizing nitrogen fixation* and the associated soil health issues is a national core research issue warranting a coordinated research push. Public funds for agriculture would be far better spent on such programs than on unsustainable fertilizer subsidies that will find their way to the less poor.

Monitoring and Evaluation

3.19 M&E was poorly designed and implemented and both these aspects are rated unsatisfactory. Given those weaknesses it was therefore difficult to use, although the findings did contribute somewhat to the design of the follow-on Participatory Agricultural Development and Empowerment Project (PADEP). Given the weak design and implementation it is difficult not to also rate utilization as unsatisfactory, although whatever evidence became available was made use of. As noted earlier, there was a baseline survey covering "collaborating farmers" (those who were participating in adaptive research) in 2000. This was followed up in 2003. Unfortunately, the 2003 survey, although intended to cover many of the 2000 sample, did not, in fact, do so.

3.20 However, the support for the University program (SUA), along with NORAD and other funding, resulted in some useful M&E work well-focused on performance indicators. This has left a useful set of skills in M&E based on log frame baselines that could be more widely used in later programs. It is understood that some of this has in fact spilled over into more recent Ministry of Agriculture M&E.

Performance Ratings

Outcome

3.21 Outcome is rated as *moderately unsatisfactory* based on *substantial* relevance, but *modest* efficacy and efficiency. However, as will be noted later, the main concern is the Risk to Development Outcome which has some impact on efficacy since system efficiency, which was a key stated project objective, cannot be divorced from risk and the sustainability of budgetary support.

Relevance

3.22 Overall Relevance is rated as *substantial*, but is not without issues. The objectives were clearly *highly* relevant to the needs of Tanzania. However, the relevance of the *design* to those objectives is somewhat questionable and is rated modest. Looking back at the performance of past interventions, the main problem in research in Tanzania has not been so much that the management skills and processes and systems of research prioritization have been weak, although that has certainly been a factor, but that research on the scale needed simply could not be sustained without substantial donor funding. While there was a valiant and rather optimistic attempt to partially get at this issue in design through privatization of export crop research and seeking non-public contributions into zonal funds, this was only partially successful. Moreover, the recent government decisions to halt crop cesses and the current lack of resources to sustain zonal programs, suggests that this may be ending up as another largely failed attempt to address the persistent issue of financial sustainability.

EFFICACY

3.23 On balance, efficacy is rated *modest,* although the project was not without some important achievements.[11] The original project objective, against which performance is assessed since there was no formal restructuring, was to increase the efficiency and productivity of crops and livestock production systems focusing on the smallholder sector. This objective calls for answers to two main questions: To what extent was the efficiency and productivity of the production systems enhanced; and, to what extent was there a focus on the smallholder sector? It is also useful to assess the means to the achievement of the objectives above, the institutional strengthening, which at mid-term was added to the objectives but was not formally taken to the Board. This is not used in this assessment in the aggregate rating other than as an intermediate output on the route towards assessing the other objectives.

3.24 With respect to the objective of *efficiency and productivity*, at the aggregate level, on balance there was only modest performance. In terms of productivity, agricultural growth in Tanzania has improved as shown in Table 1. However, it is difficult to find gains that can be reasonably attributed to TARP II, particularly in relation to yield increases which have been by far the predominant focus of research, for three main reasons. First, of the four main crop commodities listed in the PAD design summary as project indicators, three show in the agricultural census since the late 1980s significant yield declines (the cereals) and one (beans) shows no increase. Outside those four, cassava and groundnut yield trends appear to be flat notwithstanding some more disease-resistant varieties. Improved beef cattle numbers seem to be down, broilers down, layers up and improved dairy cattle up through the late 1990s but then down again since then. Milk yield changes over time are not given in the census. But the PAD focus was predominantly on food crops and PAD projections were for

11. The Region has questioned the downgrading of the outcome rating. They argue that the right question should be whether TARP II had much to do with the improved sector performance that accompanied and followed its implementation, in which area expansion and commodity shifts were the main sources of growth. They note that a restrictive measure of this would focus on the generation of technology and a more expansive measure would focus on sectoral productivity. They note the data and attribution problems in answering either question. However, they note the evidence for increased availability of relevant technologies as outlined in the ICR. IEG has reviewed this rating again which is dependent on both the efficacy and the efficiency rating, with respect to efficacy, focusing somewhere in between the above extremes at evidence for technologies that were adopted. The Region also argues that TARP II did increase the availability of relevant technologies. The data is limited but it is difficult to argue substantial attribution to area expansion and commodity shifts since the main direct focus of the particular supported research programs was on food crop yield increases, rather than cash crops or mechanization although the overarching institutional reforms and farm system linkages cannot be so compartmentalized. Defining and measuring an "increase in the availability of technologies" has always been difficult. IEG is not suggesting that no useful technologies came out. Whether the array of what emerged represents some sort of an "increase" is less certain. Obviously it was an increase over what would have happened with no research. But IEG can only turn towards the (questionable) economic analysis to assess whether this was efficient and, again, in the absence of better data, the very weak extension and still quite weak seed multiplication (e.g. at the extreme, the extraordinary 15 year delay in getting the new cotton variety out) argues for modest impact from whatever increases in technology emerged. IEG still finds the weight of the evidence given the apparent yield *declines* against the substantial projected yield *increases* in the PAD, and the weak extension service to suggest only a modest level of efficacy. IEG also finds the broader institutional impacts, which would command longer-term benefits outside the immediate research funded, to be partly undermined by the financial sustainability issue which seems especially problematic following the recent losses of funding sources noted in the report. The rest of the argument for the rating is within the text of this section which has been added to following the Region's well-considered comments on the draft.

these yields to rise by between 25 percent and 40 percent. Not only have they not risen to these levels, they have declined. Use of fertilizer, more generally used on cash crops, as noted earlier has fallen a lot, although some of this for sound efficiency reasons. Second, all the evidence points to a large contribution to agricultural growth in Tanzania still coming from area expansion. Clearly many Tanzania farmers are still operating at the extensive margin. It is hard to see much attribution here from an examination of the research programs, although there has been some work on mechanization and it would be reasonable to attribute some of the higher value crop incentive directly to cash crop research and some less directly through more complex farm system shifts. Third, the extension service has been extremely weak and probably deteriorating yet strong extension was stated in the TARP II PAD to be very important and complementary to TARP II for overall technology delivery performance. It seems clear from the impact study that, due to weak extension, many of the beneficiaries from the TARP II work were simply the farmer research collaborators who were a very small proportion of the national farmer population, although clearly some innovations, especially new varieties, have spread more widely with or without extension help.

3.25 There are also questions about efficiency which, given the objectives of improving efficiency and institutional development, cannot only be relegated to the efficiency rating. The economic analysis in the ICR relied on the TARP II survey comparison of collaborators and non-collaborators and was based largely on a minor adjustment of the PAD economic analysis which used the projected yield increases noted above. There are problems with this *ex post* analysis. First, as noted earlier, the survey is questionable particularly due to the lack of comparison with the baseline. Second, for want of better data, the *ex post* analysis continued to use the appraisal assumption of 25 percent adoption over 5 years of the fourteen assessed model crop and livestock technologies. This is quite optimistic and lack of actual data in this analysis is a major weakness since the adoption rate is one of the key coefficients in assessing technology benefit streams. As noted above, it appears from the census that average yields nationally actually fell although there is evidence that they rose for some crops for the limited numbers of surveyed research collaborators, although, for maize, even here, by only about half the increment projected in the PAD.

3.26 In addition to the above, a number of performance weaknesses related to productivity were observed by the mission or were noted by observers interviewed. Four particularly stand out. *First*, the impact of new varieties in some cases was extremely slow. For example, the predominant cotton variety, UK91, as the variety code suffix indicates, was released by Ukiriguru research station in 1991. It only became widely adopted nearly 15 years later, in 2005! This was due to lack of seed multiplication capacity[12] and other constraints. The economic losses for Tanzania in having a *fifteen year lag* in the adoption of the best available improved variety of one of the five major export crops, which would give about a 150 to 200 kg per hectare increase in yield over the earlier variety, must have been enormous. Such a delay is a serious indictment of a research and seed multiplication system supported by substantial donor funds over many years. While the research on this variety predates this particular project, the Bank support for both research and extension over the intervening

12. Some of the loss of multiplication, and off-season multiplication, capacity has been caused partly by the selling off of government-owned farms. This divestiture program needed more careful planning and phasing and, as noted in the assessment of the ASMP, greater private sector capacity building.

period appears to have failed to address this serious hemorrhaging of potential benefits. *Second*, as noted by one of the NGOs, there has been too little work with legumes for a country with very high-cost nitrogen fertilizer and with nutrition concerns. *Third*, while financial analysis of technical findings has probably somewhat improved over the last 10 years, it remains weak. There is still an acknowledged shortage of experienced agricultural economists. As an example, relative commodity and input prices have shifted substantially over the last ten years yet original extension recommendations based on outdated price ratios seem to remain on the books unchanged for decades.[13] Most financial analyses seen were old and not based on current prices. Thus what may be promising technical findings are often not being translated correctly, and then maintained through price shifts, as demonstrably profitable recommendations.

3.27 But there are also a few brighter spots in the economic/farm systems efficiency area. For example, there appears to have been greater research focus in recent years on technologies relevant to poorer farmers with low cash availability.[14] In this respect, a number of maize varieties have been tested and released which do well under a low nitrogen regime. For poverty impact this is an important area for further work. The promising work on conservation agriculture has been noted earlier.

3.28 With respect to the objective of *focusing on the smallholder sector*, this was generally achieved in the sense that, of those households receiving technical support emanating from research investments, the majority were clearly smallholders, many with a predominant reliance on food crops (although in Tanzania many poor are also export crop producers). However, again, the proportion of poor farmers nationally receiving strong technical support that could be attributed to the research program in recent years is likely to be fairly small given the limited coverage of the more intensive Farmer Field School types of support, the necessarily very modest scale of the direct research station outreach programs, and the poor quality of the remainder of the largely immobile public extension service, an immobility that appears to bias extension support to the better farmers in areas close to district headquarters.[15]

3.29 With respect to the objective of *institutional strengthening*, as a "means" objective that was added later, this was partially achieved. But institutional strengthening cannot be divorced from the sustainability of funding. While a number of potentially important institutional changes were introduced, including greater client feedback and more local autonomy in research planning, the lack of post-project funding to sustain many of these new processes raises the question of whether such achievements can really be defined yet as "institutional strengthening."

---

13. Financial profitability of innovations is a dynamic variable that needs to be revisited regularly as input/output prices change.

14. Often, the most important question a VEW needs to be able to answer, and frequently never can, is the question: "I have only Tz50,000 that I can afford to invest in my farm this year, what are the best investment options I should consider for this farming system given input supply and marketing constraints?

15. Probably partly for this reason, in one district the mission, on its field visit, was immediately taken to a small cattle feedlot on the edge of the town.

EFFICIENCY

3.30 Efficiency is rated *modest*. As noted above, there are questions about the validity of the assumptions in the economic analysis which are not repeated here. At the institutional level, observable in the field were a number of enhanced processes that have probably improved operating efficiency of the management system, including greater management control in the hands of the Zonal Coordinators, the introduction of the Zonal Research/Extension Coordinators and the various research/ extension coordination mechanisms. However, there were a number of efficiency problems evident including: (i) the problem with operating costs even during the project period due to difficulties with expenditure verification and therefore disbursement which made the planning of sustained programs by researchers difficult; (ii) the extraordinarily poor quality of construction; (iii) the weakening of the performance of extension due to the decentralization which seems to be pulling more research resources towards making up for this weakness;[16] (iv) what appear to have been inefficiencies in procurement and disbursement [17] and the long delays in disbursement to research stations and to the University, said to be far slower than all other donors; and (v) again, the splitting of crop and livestock research due to the ministry split which happened during the period of the project and which will clearly raise overhead costs substantially with a doubling up of many research facilities while reducing research coordination and effectiveness.

3.31 Attempts to fund research through district contributions are inefficient. While there is a good rationale in decentralizing extension services so that they are more accountable to the end-users, agricultural research is characterized by much larger economies of scale. *It makes no sense for districts to be expected to transfer their scarce resources to agricultural research*, particularly when they cannot make any contribution to extension services for which they are directly responsible.

3.32 Finally, staff performance efficiency has generally been found to be impacted by incentives. In the public research service in Tanzania there is still a serious incentives problem. Salaries are very low [18] and rewards for superior performance are almost non-existent beyond a few small annual prize supplements. There is a performance review system on paper but it has no impact on salary increments. At the time of the mission there was a pay rise for all researchers that was welcome but this was merely a catching up with past inflation erosion and slippages behind routine promotions. This increase incorporated no performance criteria.

RISK TO DEVELOPMENT OUTCOME

3.33 Risk to Development Outcome is rated *high*. The problem is that many of the improved processes cannot be sustained. For many years, research has gone through an

---

16. It is clearly inefficient for research to do any more work directly with farmers than is absolutely essential for understanding the needs of farming systems and farm households.

17. Such as communications equipment printers that required ink cartridges that, in Tanzania, cost US$1000!

18. A Ph.D. with long experience receives about US$7,200 per year, about half what is paid in the semi-privatized cash crop research stations. A starting salary for a BSc at zonal stations is about US$2,400 a year. However, researchers do get free housing and medical.

inefficient cycle of funding fluctuations with donor funds giving temporary support that cannot later be sustained.[19] Currently, the hope appears to be that the new donor basket funding arrangement will help, making the application of funds to operating costs easier and allowing donors to continue with support in a rolling program without interruption. This seems likely to give the borrower more freedom to allocate funds to immediate priorities. Whether this modality of donor funding represents progress on the issue of sustainability is debatable. The evidence over recent years suggests that either the public research system is far too large to be sustained by government or that government has been unwilling to give research in particular, and agriculture more generally, sufficient priority. The promise of funding cash crop research through the commodity export industries that, in turn, would release more funds for food crop research, at one time offered a ray of hope. But that hope now seems to be fading with the banning of cesses and promises by the center that the agriculture budget would now reimburse that loss. Moreover, at the same moment comes news of fresh demands on the agriculture budget with the return of fertilizer subsidies that surely threatens overall agriculture budgets even further.

3.34 The loss of cesses is a serious blow.[20] The logic of cesses was not only to provide funding support for research on the particular commodity, but also to enhance the industry participation in the use of that funding and in setting research priorities. Industry involvement had improved considerably with growers and processors having positions on boards and contributing to research prioritization in all the main export commodities even though the cesses, in most cases, were not yet near a level to support all research. The logic of the removal of cesses appears to be that the collection itself requires a marketing "gate" which curtails freedom to export. At the present stage of budgetary support for agricultural research in Tanzania and with the shadow of fertilizer subsidies, the costs of this abandonment of cesses appear likely to be higher than the benefits.

---

19. The Region has commented that it is hard to see what would constitute a better alternative to address the acknowledged financial sustainability issue and would welcome guidance. While IEG is not in the business of making specific country level recommendations, this is a fair question. While there is clearly no magic solution, such a persistent problem over a series of projects would seem to call at least for the following: (i) up front full disclosure in the PAD that tabulates past budgetary support for the sub-sector (in this case research), and relates this to post-project needs so that the sustainability issue is not hidden from management and the Board and so that the scale of it can be better appreciated; (ii) greater attention during project design to capacity analysis and rationalization/downsizing within the institutions (e.g. in this case, much adaptive and participatory research with farmers on farmers' fields can be done with *no buildings, labs, support staff or land at all*, only researcher salary, a notebook computer, a cell phone, some modest operating costs and reliable transport. (Fenced research stations with nice offices risk reducing researcher field time and farmer interaction); (iii) the development of more regional projects sharing research across national boundaries but with clear performance commitments from lead institutions; (iv) an agreed (with the borrower and donors), and monitored by CASs, quantified pathway towards system financial sustainability over time, perhaps associated with an APL with agreed triggers; (iv) cost recovery where possible but again with a realistically projected and agreed borrower and donor phased transfer. Cost recovery was part of the reforms in this case but was quite loosely outlined more as a hope than a plan and entirely qualitatively. No financial numbers were offered in the PAD discussion of sustainability to show the past trends and scale of the funding gap and expected post-project needs. None of the above suggested actions alone or together can guarantee improved financial sustainability but at a minimum more attention along these lines could enhance transparency about the situation and prompt more rigorous questioning of scale and capacity.

20 See also the borrower's comments on, and concern about, this issue (Annex C).

3.35 What are the overall public funding prospects? The evidence suggests that over time there has been little increase in the share of the budget to agriculture. Government expenditure for agriculture and agricultural research over the period 2000 to 2005 increased for a while but then fell back again as indicated in Table 3.

Table 3. Agriculture and Research Expenditure as a Percentage of Government Budget

	2000/2001	*2001/2002*	*2002/2003*	*2003/2004*	*2004/2005*
Agriculture as % of Total Budget	3.02%	2.72%	4.32%	4.83%	4.61%
Ag. Research as % of Agriculture Budget	4.05%	4.66%	5.49%	3.51%	3.68%
Ag. Research as % of Total Budget	0.12%	0.13%	0.24%	0.17%	0.17%
Source: Government Statistical Office website.					

Table 4. Actual Agriculture and Food Security Expenditure as a Percentage of Total Budget Actual

Year	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Percentage	3.12	1.94	2.11	1.54	1.62	2.48	2.14
Source: calculated from data on GOT Statistical Office website							

3.36 The budgeted *public* expenditure on research, excluding donor funding, was 0.026 percent of agriculture GDP at factor cost in 2001/2002. This is far below what usually has been considered to be needed and justified given the high returns to research generally found. The total national figure of research expenditure by Tanzania is not known since expenditure in private or semi-private cash crop research is not known with enough precision. But clearly public research expenditure is low.

3.37 Actual expenditure on research is not given here due to differences in data sources, but nationally, the actual expenditure across all government departments has generally been around 60 percent of the amount budgeted. Actual expenditures on Agriculture and Food Security as a percentage of the total budget is given in Table 4. There are some questions about the accuracy of this data since some inconsistencies were found, and, as earlier reports have noted, Tanzania statistics have often been questioned, but it appears that, after falling in 1999, expenditure rose again in 2003 but not to the same level it was in 1998/1999. For a sector so dominant in GDP and so important to potential poverty alleviation and employment, about 2 percent appears to be a very low level of expenditure.

BANK PERFORMANCE

3.38 Bank Performance is rated, on balance, as *moderately satisfactory*, an aggregate of a moderately satisfactory rating for quality at entry and a satisfactory rating for supervision but also influenced by the moderately unsatisfactory overall outcome rating. As noted in the ICR, Bank performance at appraisal was considered only marginally satisfactory mainly due to

weakness in the design of monitoring and evaluation which was noted in the ICR as a serious deficiency for a research project. IEG would add that this was particularly serious in the second of a project series by which time such issues should have been taken care of. As experience indicates, this weakness has indeed manifested itself *ex post* in the lack of data for assessment of incremental benefits. While project supervision was generally satisfactory, there were several weaknesses. First, the reformulation of the project objectives by simply tacking on the additional language on the end of the original objectives and not going back to the Board with the reformulated project was casual and insufficient although, in the end, most of the subsequent redirections of funding were appropriate. Second, while there is some evidence that the missions did urge the borrower to address the construction quality issue on a number of occasions, quality in this case was so egregiously bad across a number of sites constructed at different times that it is difficult to conclude that enough was done soon enough. The project was handicapped by having three Task Team Leaders over the life of the project but there was good continuity in actual mission membership. The mission heard generally positive comments about Bank performance from the borrower at a number of levels, except for the widespread view that the Bank procurement and disbursement procedures had been far more onerous than those of other donors and that this had contributed considerably to slow implementation. There was concern about the incompatibility of the size of the Special Account with the expenditure verification procedures expressed by zonal stations and about the need for longer-term and earlier commitment for, and disbursement of, research funding. Frequently funds arrived too late for the seasonal research needs making planning difficult, making commitments with client groups risky, and negatively impacting the efficiency of funds application. However, supporting the overall satisfactory supervision rating, a Bank Quality Assurance Group assessment in 2002 rated project supervision satisfactory.

BORROWER PERFORMANCE

3.39 Borrower performance is rated *moderately unsatisfactory*. In the ICR it was rated satisfactory but marginally so. While there were important reforms introduced by the project in the directions of client feedback and in processes to link research and extension, and research coordination, there were a number of problems. First, a number of these reforms failed to become fully grounded. Second, there were serious problems with insufficient counterpart funding during the first two years. Third, the splitting of the ministry handling crops and livestock into two has set back the core focus on a farm systems approach. Fourth, while not the direct responsibility of the research project itself, the continuing weaknesses in the extension service has devalued the incremental gains in research. It remains to be seen whether decentralization can be completed in future and supported with capacity building to the point at which the extension service can function sufficiently to be an important complement to research and whether pluralism of both approach and funding can plug the gaps sufficiently. Fifth, due to the confusion about decentralization and the Memoranda of Understanding with district councils, implementation of the proposed funding arrangements for research funding by the districts never really took off. The ICR argues that decentralization has matured so that the roles at the local level are more clearly understood and the situation has improved. This was not really evident during the mission's visits at district level. Sixth, the borrower exhibited very poor supervision of construction contract management which leaves a burden of unavoidable future expenditure.

4. National Agricultural Extension Project II

Objectives

4.1 The main objective of the project, somewhat clumsily stated in the SAR, was "to continue to improve the delivery of extension service to smallholder farmers for increasing their incomes and productivity, while improving its relevance, sustainability and cost-effectiveness." It was intended to continue the essential elements of the training and visit (T&V) system of agricultural extension but was to "work using a participatory approach, giving an effective role and voice to farmers." It was also intended that it would initiate the process of private sector/NGO/farmer participation in extension with cost sharing, including selective privatization, where feasible.

4.2 A year after project approval, implementation responsibility for the extension service was passed from the central ministry to the local authorities, establishing 119 autonomous district extension services and leaving a much reduced role for the central ministry. After a lag of nearly two and a half years the development objectives were revised, but without formal restructuring and Board approval, to the following: "to continue to improve the delivery of extension services to smallholder farmers in the borrower's territories by focusing on the enhancement of the technical and administrative capacity of the LGAs to provide such extension services." As with the research project, this left the overall aim of the project the same but added greater focus on institutional capacity, a reaction to the shift to decentralization since appraisal. This assessment uses the original objectives for ratings since the project was not formally restructured. However, as with the research project assessment, the capacity building is also assessed here as a potentially important intermediate output on the route to the stated objectives. This lag of over two years in refocusing the project seems an extraordinarily long time. Furthermore, there appears to be no case for not going back to the Board given the fundamental institutional shift to decentralization.

Project Design

4.3 The project had four original components.

(a) **Institutional Strengthening** (US$13.7 million planned, US$17.1 actual) for reorganizing and strengthening the extension services at the ministry headquarters and the field services to improve farmer linkages including increasing the number of Subject Matter Specialists, the establishment of District Extension Steering Committees, retrenching unsuitable Village Extension Officers (VEWs), and establishing M&E.

(b) **Extension Education and Training** (US$ 10.6 million planned, US$9.4 million actual) for enhancing the effectiveness of technology transfer through staff training, both local and overseas courses; farmer training and study tours; extension materials; and training support, including establishment of a Training Coordination Committee.

(c) **Communications Support** (US$ 2.6 million planned, US$2.3 million actual) to support the strategy to decentralize information management to enable effective response to area-specific local farming community needs for information. It established Zonal Communication Centers, reorganized the ministry's Extension and Publicity Unit, carried out a needs assessment for communications development, provided training for selected staff, and technical assistance and equipment for communications.

(d) **Pilot Initiatives** (US$1.5 million planned, US$1.8 million actual) involving pilot initiatives to improve: extension management, technology transfer, farmer/extension/research linkages, participation of other providers, input supply, farmer empowerment, and gender impact.

4.4 The restructured project retained the four original components but reallocated the budget among components to emphasize capacity building of extension services in the LGAs. In addition, some small components in Zanzibar were added.

4.5 **Extension.** The project closed 2 years later than planned due to the redesign needed to accommodate the decentralization, slower than expected achievement with the support for the new LGAs, the 1991 splitting of the ministry, the intent to shift extension to the President's Office and then the decision not to, and the extension to new areas and Zanzibar. Even without some elements of these changes that could be considered exogenous, the projections were clearly very optimistic.

Appraisal and Quality at Entry

4.6 Quality at Entry was weak. The Bank was clearly not sufficiently nimble at appraisal, nor was it nimble later even after the decentralization had been finally implemented. After this it still took two and a half years for the project to be redirected. As noted in the ICR, the Bank should have been more proactive in preparing for this. If it had been, some of the problems that arose could have been pre-empted.

Box 3. Could Farmer Field Schools Go the Route of T&V?

Interestingly, the main organizational elements of the Farmer Field School (FFS) approach are not very different from the abandoned T&V. Therefore there is some risk that, if taken to scale, FFS may succumb to the same problems. Both T&V and FFS call for the use of contact-type groups. Both call for regular visits by staff to these groups although this cannot currently be sustained widely in the Tanzania public extension system due to lack of operating funds. Both focus on a limited array of key technologies which was criticized in the case of T&V but more recently is being often broadened in FFS. Both rely on subsequent farmer to farmer dissemination which was a weakness in T&V and, drawing from global evidence to date, seems to be an emerging weakness in FFS in some countries. Both lie at the intensive end of the extension options and are therefore relatively costly on a per household basis. Both call for substantial staff training which again, at any scale, calls for larger resource commitments than Tanzania appears able to muster at present. The main difference between T&V and FFS is that FFS, in practice, has generally followed a more farm systems type of approach with greater focus on farmer feedback and self-discovery learning approaches and FFS is more flexible. But overall, the differences between the two approaches, particularly in terms of institutional structure as opposed to communication content, are not as substantial as they might at first appear. There would appear to be three lessons here. First, there is a need for early comparative M&E to assess the cost effectiveness of alternative extension approaches (within a pluralistic pattern) to ensure that FFS is not simply the latest unsustainable and ultimately ineffective fad. Second, there is a need for a measure of caution in scaling up before donors and borrowers hastily climb on yet another possibly shaky bandwagon. Third, perhaps those countries that have been adjusting T&V, rather than abandoning all elements of it and starting from scratch, are following a sensible strategy.

4.7 As also noted by the ICR, there was a tension in the design between the commitment to the T&V approach and the shift towards greater demand responsiveness. This tension partly reflected a strong commitment in the borrower ministry towards the T&V approach but an increasing questioning of it within the Bank and the Bank team. The timing of appraisal came at a significant point in the evolution of Bank thinking on T&V. Unlike many other countries now testing alternative extension approaches, there is still in Tanzania a surprisingly widespread commitment among officials to a relatively traditional T&V approach, particularly among middle level staff. The elements of the latest fashion, the Farmer Field School (FFS) approach, are, in fact, not very different to T&V (see Box 3).

Implementation

4.8 Implementation performance was influenced by the failure to sufficiently prepare for the decentralization shift during appraisal and by the delay in adjusting for it afterwards. While, in general, decentralization had been considered a positive shift by the Bank, notwithstanding some misgivings among agriculture/rural staff due to the expected research/extension linkage problems, the splitting of the ministries [21] was viewed by the Bank as a potentially very serious and retrograde step. Indeed, the Bank discussed its concern about this at the highest levels but was unable to influence the outcome.

4.9 Taking the project components in turn, with respect to *institutional strengthening* there was significant achievement in staffing rationalization. About 900 of the 4,725 under-qualified village extension officers (VEOs) were retrenched and many Subject Matter Specialists were redeployed to the regions and districts. There was substantial delay in establishing a functioning institutional framework for extension services due to the weaknesses of the district administration compounded by their overwhelming new responsibilities. By project completion, about 5,800 extension workers had been deployed at district and village level to approximately 10,500 villages. This gave a ratio of about one half of what was intended in the strategy, to have one VEW per village. The project was able to establish Zonal Research and Extension Liaison Offices to improve communication linkages between research and extension. Extension staff participated in the zonal technical committees, workshops, agricultural shows, and the formation of farmer groups. There was joint participation of researchers, extension agents, and farmers in Farmer Field Schools, in certain other groups, in field days and in the various pilots.

4.10 With respect to extension *education and training*, 650 VEWs were upgraded with one year courses. In addition, 405 diploma level staff were trained at the ministry institutes, including those covering livestock. There was a substantial amount of shorter term training through study tours and on-the-job training. However, due to shortage of funds, the regular technical training programs through workshops and monthly training sessions halted part way through the project, a sign of sustainability problems to come. An extension newsletter started under the project was later discontinued due to lack of funds. About 4,300 farmers benefited from residential training and approximately 37,000 from on-site training. About

21. This resulted in three separate ministries with responsibility for agriculture: the Ministry of Agriculture and Food Security (MAFS), the Ministry of Water and Livestock Development (MWLD), and the Ministry of Cooperatives and Marketing (MCM).

1,400 farmers attended study tours outside their areas. A number of training institutions including the University, twelve ministry training institutes and a number of farmer training schools received assistance.[22]

4.11 With respect to *communications support*, the central publicity unit and two regional centers were strengthened. Some of the planned communications capacity was shifted under the zonal stations to be funded under TARP II. A substantial number of booklets, newsletters, brochures, and radio or video programs were produced. The quality of those which were seen by the mission was quite good but the quantity in relation to numbers of farm households was small. However, given the rapid changes globally in information technology, much of the equipment is already close to obsolete. It is very unlikely that there will be sufficient funds to upgrade unless donors fund this again.

4.12 With respect to the *pilot initiatives*, thirty-five extension-related pilots were initiated including: extension management systems, farmer/extension/research linkages, the role of the private sector, farmer empowerment and the empowerment of women, and the piloting of alternative extension management methods. Under this program the FFS approach was tested in 16 Districts under the project and since then many more districts have been included. Under the project, farmer groups were supported for multiplication of foundation seed for sale to other farmers. A number of initiatives tested combinations of input supply with extension. However, *there was no comparative analysis of the costs and benefits of the range of alternative extension approaches tested* although there is some cost evidence for some of the individual piloted approaches. This has been a global weakness of Bank projects testing a range of extension activities. The lack of economic analysis and impact data makes it impossible to determine which was the most cost-effective.

4.13 While, over the project period, there were a number of useful extension pilots, most initiatives have depended on a donor project. Meanwhile, the basic extension service in many districts languishes due to lack of operating funds, lack of performance incentives or promotions, and frequently late salary payments. The picture is of islands of promise with intensive outside assistance floating in a morass of operational paralysis. Currently, outside special programs, district level extension staff take a considerable risk in planning work programs with farmer groups due to highly uncertain transport. There is a significant risk of leaving them disillusioned.[23]

4.14 This scenario of acute resource limitations raises a number of questions that need to be answered soon: (i) Is the scale of the public extension service still simply far too big for government at any level (center or districts) to maintain? (ii) Are the higher cost extension activities such as FFSs pulling away so many resources that there is a sub-optimal balance

---

[22] The borrower argues (see Annex C) that the report underplays the extent of training noting that more than 75 percent of extension staff were trained by the two projects NALERP (earlier) and NAEPII. However, the borrower does support the concern about sustainability of funding (see Risk to Development Outcome) noting that since the project closed "training for extension workers has been a nightmare."

23. VEWs, who, with a Tanzania average family size, are earning below the global poverty level of $1 per capita per day, rarely get gas allowances or travel allowances or maintenance for their motorbikes if they are still lucky enough to have one, and are therefore either unable to travel or are spending their own money to do so. The surveys show that a significant percentage of VEWs, when they can afford it, have done just that.

between the "have" groups of clients and the large mass of "have-nots"? (iii) Given the lack of resources, are farmers being given the opportunity to see the true potential of extension staff that might lead to pressure on district council members to increase resources for extension? Or will weak extension become a self-fulfilling prophesy because judgments on future effectiveness are made on disappointing past experience?[24] (iv)Will the resource constraint change once decentralization has been taken further?[25] Unfortunately, the districts' capacity to raise funds has actually been greatly curtailed recently by the move to ban local "nuisance taxes" and take away the development tax.

4.15 To expand on the decentralization issue, the current situation is that close to zero funds for extension come from district revenues. Generally, in institutional reforms, the purpose of decentralization has been to align the provision of public services more closely with the principle of subsidiarity concerning the most appropriate level of government at which particular public services should be delivered for efficiency and to be responsive to beneficiaries. However, the economies of scale in revenue collection generally exceed economies of scale in service delivery so it is to be expected that the central government would collect larger revenues than it needs and transfer some to lower levels to enable them to deliver services. However, in the case of Tanzania so far, with well under 10 percent of revenues for the district collected locally and with virtually all funding for extension coming from the center and under quite controlled terms of use, the concept of beneficiary influence on extension through local representatives and the "power of the purse" seems unlikely to work until district shares rise considerably. As noted earlier, it makes little sense to seek district contributions to agricultural research where there are much larger economies of scale in research and where districts cannot even fund any extension services.

4.16 The mission's view is that the pervasive lack of resources currently even at the intensity of two villages per VEO is so overwhelming that debates to determine how best to structure public extension are almost superfluous. In agriculture, when staff cannot travel except, in a few locations, on foot, it really makes very little difference what particular permutation of systems of knowledge transfer and feedback relationship with clients is proposed to be used. Although new communications technologies can play a role in stretching resources, by its nature, servicing agriculture requires some degree of mobility.

---

24. One group of farmers spoken to by the mission listed a number of investments as priorities for their community but none mentioned more or better extension. When finally prompted about whether being given an extension officer would be considered useful by the community the response was largely shrugs until one volunteered that it would be of little use because the extension officer would not come to see them anyway. (Some members had not seen an extension officer ever, some had seen one in 2001 in connection with paddy cultivation, and another recalled seeing one in 1996 in connection with cotton spraying. For this group, extension staff were not seen as relevant.) But the question here is whether this attitude is due to past and current poor extension commitment and skills or simply the almost universal lack of travel resources for VEWs.

25. At present, the districts, while nominally responsible for extension, still get the extension budget from the center and cannot shift funds. It is not even clear that they can support and get promotions, so agriculture staff currently see themselves as in a limbo, with nobody really concerned about their future. The word "orphans" has been used.

Monitoring and Evaluation

4.17 M&E was weak. The appraisal report did not include performance indicators although there was an incomplete set of indicators in the Memorandum of the President. Design is therefore rated unsatisfactory. As a result, the baseline and follow-up surveys did not have clear indicators to guide data collection. This was surprising since one of the main lessons of the forerunner project, the National Agriculture and Livestock Extension Rehabilitation Project (NALERP), was the need for clear indicators and monitoring of those indicators. It appears the Bank and borrower had not learned. This weakness has seriously affected the potential project benefits to the Bank and borrower because the most important learning would have been to better understand the cost effectiveness of alternative extension systems ranging from extensive to intensive, from high to low cost recovery, and from high to low beneficiary participation time. As with TARP II, the September 2003 Final Beneficiary Survey of NAEP II exhibited a number of quite serious weaknesses [26] and implementation of M&E is therefore rated unsatisfactory. As with the research project, while results were used to some extent where relevant, the weak M&E made utilization difficult and therefore utilization is also rated unsatisfactory. As noted above, with extension now being tested in a number of ways, poor comparative M&E has been particularly costly for the learning process.

Performance Ratings

OUTCOME

4.18 Outcome is rated *unsatisfactory* based on modest relevance, efficacy and efficiency. Moreover, as with the research project, it is difficult to separate development risk or sustainability from efficacy for a project that is aimed at enhancing a system. The impact evidence is insufficiently convincing to attribute significant benefits to the project. The project undoubtedly contributed to a number of useful extension experiments. But, as noted, these have not been sufficiently well evaluated for comparative cost-effectiveness. The project also contributed to some significant training and strengthening of training capacity. At least during the period of the project, there was some improvement in research extension liaison arising from the investments in both NAEP II and TARP II.

---

26. The main weaknesses were the following: (i) enumeration was done by extension staff who had a stake in the outcome. (ii) There was a lack of comparison with the 1999 baseline except for a few selected coefficients. (iii) What was termed "accessibility to extension services", found to be 90 percent, was simply the interpretation of the percentage of farmers aware that extension services were available in the village. Yet experience suggests that it is rarely lack of awareness of extension staff existence that is the problem, it is that extension staff do not visit or do not have useful messages. (iv) The questionnaire was extremely long and tedious. (v) There are substantial discrepancies with the National Sample Census of Agriculture done at about the same time. (For example, the NAEP II assessment found that 83 percent of respondents reported receiving extension advice during the year whereas the Census found it to be only 34 percent of crop growing households and 16 percent of livestock households). (vi) With respect to some technologies, such as Integrated Pest Management and post-harvest technology, the assessment found huge increases in adoption rates, e.g. from 7% to 26%, over one year between 2002 and 2003 which are difficult to explain. (There were problems with the Census findings also, for example, respondents claims of technology adoption involving inputs were noted to be far above the reported input purchase levels.)

4.19 However, it is clear that, even after a series of projects supporting extension, the overall public extension service remains extremely weak and under-funded. Indeed, some observers say that extension has "collapsed". Often the reason given is decentralization. NGOs and input suppliers working in agriculture and spoken to by the mission found the extension service largely absent or lacking in commitment due to poor incentives and lack of funds to travel. As a result, in some areas, NGOs pick up the operating funds for extension services. While this could be defined as "pluralism" in extension, and may now be pragmatic and even desirable, it is also indicative of a largely ineffectual public service.[27]

RELEVANCE

4.20 Overall, relevance is rated as *modest*. Relevance of objectives and relevance of design are considered. The objectives, particularly the revised objectives, were relevant. However, project design did not sufficiently accommodate the emerging decentralization either directly or even through preparedness. Also, the design tension between the older T&V strategy and the more client-oriented group approach was never properly resolved. Finally, while some attempts were made within the design to address the chronic financial sustainability problem through private, NGO, and farmer group support and district contributions, these were optimistic and in the event such sources have been small and very localized.

EFFICACY

4.21 Efficacy is rated *modest*. With respect to the objective of *improving the delivery of extension services*, the evidence is insufficient to demonstrate significant incremental gains attributable to the project. While there has been continued moderately satisfactory growth in the sector, albeit with limited poverty impact, it is difficult to find evidence from the surveys that any gains have arisen from project interventions. Based on discussion and field observation, what appears to have happened is that there have been a number of quite useful localized initiatives, supported by what are probably well above national average extension expenditures per household, that are showing some technically promising impacts. But the wider general district level extension service outside those areas is almost moribund due to lack of funds.[28] It is possible that, as decentralization is consolidated, and as more funding is passed directly to the districts, the situation will improve.[29] But recently districts lost about

---

27. The author's personal observation, from a knowledge of agriculture in Tanzania in the past, is that public extension is currently weaker than it was in the mid 1970s to early 1980s, which was a period of serious economic problems.

28. As an example, in one of the better-off districts, the extension budget for the quarter for all activities other than salaries and covering operations for all extension officers at village level and those at the district HQ on agriculture, land use, crop production, pest control, etc. was about $23 per working day *for the whole district.* This was to cover fuel, vehicle repairs, travel allowances, training workshop costs, supplies such as paper, computer service, printer ink, publicity material, etc. It should be noted also that other district officials used the vehicle (when it was not out of order) for non-agriculture activities. Livestock services in this district, now under a different ministry, had received zero budget so were free-riding on the crops budget. This was in a district with vehicles or motor bikes (3 of 8 working) that were mostly about nine years old. Any major vehicle repair could easily eat up a third to a half of the quarterly budget in one bill hence there were several old unrepaired vehicles.

29. Unfortunately, there is a long history of institutional disruption in extension and it must be expected that the success of any new approaches, including even pluralism, will need to overcome cynicism and damaged staff expectations. By 1997, the extension service had been reorganized about thirteen times since independence

90 percent of their own income sources when a number of local taxes were abolished in the name of reducing what were termed "nuisance taxes." Until more funds are found, the basic Tanzanian extension service across much of the country is not in the shape it should be after a series of Bank and donor-funded projects over several decades, although the PADEP project was found by the mission to be temporarily filling useful gaps in some districts.

4.22 With respect to the objective of *strengthening the local government capacity* to undertake extension, it is too early to assess achievement. The main institutional change over the project period was towards decentralization to the districts. But, as indicated in the earlier discussion, this project had nothing to do with that shift; indeed, it seems to have been largely taken by surprise by it. However, subsequently the project did support capacity building at district level. Substantial numbers of extension staff and farmers were trained and new planning processes and approaches to client feedback were introduced. However, training budgets are now very tight again and it appears that this level of training cannot be sustained. Partly in association with the earlier ASMP, which has been reported on separately, there were also changes in extension support from the center aimed at improving efficiency. Over a short period the project also tested some alternative extension approaches on a pilot basis. Unfortunately, as noted, there was limited comparative evaluation. Meanwhile, extension is still left with a major institutional issue, the partial nature of the decentralization and the disconnect between funding and responsibility. This current arrangement gives insufficient management freedom or incentive to either party.

4.23 There are a number of related issues of concern in assessing overall extension efficacy. First, surprisingly, there has been little training support under projects to enhance the skills of input suppliers or local stockists although some of the larger suppliers spoken to by the mission maintain direct relationships with research stations. Suppliers seem to be an untapped potential extension force in a pluralistic system. In many developed countries a substantial share of technical agriculture knowledge is passed through input suppliers notwithstanding some risk of bias towards their own products. Second, seed supply is still poor, resulting in extension staff still getting involved in input supply.[30, 31] Third is the question of whether, in fact, there really are available technologies sitting on the shelf waiting to be taken down, as is often claimed. While there is no blanket answer to this, overall there seems still too little appreciation within the research/extension system of the labor and risk constraints to adoption by the poor. The old, well-tested, rule of thumb that, for strong adoption, farmers need to see a 2:1 benefit/cost ratio, seems to have been lost. Many recommendations that are not being adopted do not appear to meet this criterion nor the criterion of high returns to incremental labor where land is not a constraint. Fourth, extension efficiency is still constrained by the lack of marketing and input supply and credit services.

(Dejene et al 1997), but now fourteen times adding the recent decentralization change. Overlaid on that have been many shifts in approach including the T&V system and more recently FFS. Extension staff could be forgiven for thinking that all things will pass.

30. The mission witnessed a truck load of sorghum seed being distributed by the district government. In most areas, livestock staff sell veterinary drugs to supplement their income.

31. In the Arusha area, other than some local tomato seed bred at Tengeru, most other vegetable seed in the input store visited was from Holland and therefore unlikely to be suited to the soils, temperatures and day lengths in the zone, but better than nothing.

For example, there is still no premium paid to farmers for higher quality clean cotton or for quality cashew. Quality seed remains in limited supply, although there has been some improvement in maize seed supply through private breeders. Credit is constrained by lack of land titles and the still limited, although increasing, numbers of functioning savings and credit groups and limited microfinance management skills. As other observers have noted, extension should not alone carry the blame for modest adoption rates.

EFFICIENCY

4.24 Efficiency is rated as *modest*. The ICR attempted a simplified ERR analysis using the appraisal report (SAR) "break-even" type of analysis but with only partial price adjustments. It used national yield data instead of the (inadequate) beneficiary assessment data. However, it also used the farm budgets from the SAR with the original SAR border prices, adjusted to 2003 prices, and with some labor and variable cost price adjustments. The conclusion was that the project would have given a 23 percent ERR if 100 percent of the observed yield increases were attributable to the project and 6 percent if only 50 percent were attributable. Even an assumption of 50 percent seems very optimistic given the observed poor state of the general extension service (outside the limited number of localized intensive FFS, research collaborator or Savings and Credit groups) and given the many other contributing investments such as research and improved processing and marketing. Also, the border price assumptions seem to ignore the decline in commodity prices and the rise in fertilizer prices since the SAR, although the ICR argues that the latter may have been compensated for by greater use of manure. In addition, due to lack of data, the ICR simply used the SAR livestock data as given, updated to 2003 prices. Even without questioning the production data, this very simplified ERR analysis suggests a rather modest ERR. Given the generally weak state of extension, it would be very surprising if as much as 50 percent of yield gains were really attributable to the project. Moreover, commodity prices have slipped since the SAR and therefore benefit streams would need adjusting downwards. This IEG assessment did not have the resources nor the data to rework the ERR since it would have called for rebuilding the data from ground up. But on the basis of the above even the 6 percent ERR seems optimistic.

4.25 Turning to more qualitative efficiency aspects, the retrenchment of staff has resulted in a leaner extension service which may have had the potential to be more positive for intervention efficiency, although over a smaller scale.[32] Moreover, the substantial central ministry overheads for extension management have been reduced in the reforms. However, against this, as noted above, there is a now a serious lack of ability to operate and a lack of incentives. For example, in one district visited there had been no promotions among the extension staff for 8 years! Finally, the splitting of the ministries has also almost certainly reduced efficiency by raising the costs of coordination.

RISK TO DEVELOPMENT OUTCOME

4.26 Risk to development outcome is rated *high*. Looking to the future what is likely to happen? There have been some useful extension experiments to explore the various options for a pluralistic approach. However, these have been largely funded by donors. In addition,

32. ERR analysis is unsuitable for comparing interventions of different scale.

some private companies such as Cargill have their own extension staff. In future, it had been hoped that resources passed directly to the districts for their control would be larger and with fewer strings. But when that happens, it remains to be seen what share will be channeled towards agriculture. In discussions, the mission found quite supportive rhetoric on agriculture in the districts, but the fear of some observers is that agriculture may suffer once funds become more fungible. One view is that local district politicians can more readily attach their names to structures such as schools or clinics than to some ill-defined gradual shift in the growth rate of district agricultural productivity.[33] While the new basket funding Agricultural Sector Development Project will channel funds to extension at district level, after so many projects, yet another injection of donor funding cannot alone be a main determinant of the risk to development rating, there needs to be a more fundamental and lasting financial sustainability solution.

4.27 To explore this further, what if extension does not rely on public funding? At present, the strategy of "pluralism" appears to have an unspoken subscript that suggests that the approach will push private and NGO supported extension and farmer funded extension as far as it can go. If the public extension system can gain funding and turn itself around so much the better but otherwise it will be allowed to wither and die. The problem with such an outcome is twofold. First, private and NGO-based extension, as well as a number of donor programs, rely on buying away and supplementing public extension through paying salary supplements and travel, so that, if public extension under the districts did slowly die, NGOs and the private sector would need alternative more costly approaches to access the skills. They are currently free-riding on the underutilized skills, training and salaries of the public extension service. Although efficient in the short term under the present budgetary circumstances, this may not be sustainable longer term. Second, if public extension does wither and die, it seems likely that the poorer farmers and those predominantly producing food crops will suffer disproportionately. There is some global evidence that non-public extension, as might be expected, tends to target the higher income farmers and the cash crops. Whether, in Tanzania, such an approach could relieve sufficient budgetary burden at the top end to enable the poor at the bottom end to be adequately covered is doubtful.

BANK PERFORMANCE

4.28 Bank Performance is rated *unsatisfactory*, as in the ICR, although the ICR qualified it as marginally unsatisfactory. Quality at Entry was unsatisfactory due mainly to the lack of

33. A particularly troubling aspect related to sustainability of extension in Tanzania is the apparent failure of politicians, both central and local, and some ministry and extension staff, to move on from old top/down approaches to extension. Over a period of only three weeks in October while the mission was in the field, there were a number of reports in the Tanzanian press of farmers actually being taken to court for crop husbandry violations such as failure to weed cashew trees or not adhering to recent sudden and draconian livestock grazing bans (which, under the label of destocking programs go back to colonial times and are no doubt still resented greatly). The mission asked one farmer what was discussed the last time he saw an extension officer. The farmer said he had been told not to intercrop his maize with his cotton and he added, somewhat shamefaced, that he was "not aware it was not permitted". Notwithstanding lack of clear research evidence from Ukiriguru on this old cotton/maize pest transfer issue, the law not to mix maize with cotton is still on the books nationally and, it appears, is still being waved at farmers, if not very strictly applied. Such attitudes to farmers are obviously inimical to the purported strategy to make extension client-oriented. It is difficult to predict whether decentralization will make this still quite persistent "development by fiat" attitude stronger or weaker.

readiness for the decentralized system. Moreover, as noted above, during supervision, the Bank was insufficiently nimble even during implementation once the changed institutional decentralization was put in place.

BORROWER PERFORMANCE

4.29 Borrower performance is rated *unsatisfactory*. Again, the ICR rated borrower performance as marginally unsatisfactory. The main borrower performance problems included: the flawed quality at entry; problems with counterpart funding (there was no counterpart funding provided for over a year in 1999 to 2000); the highly inefficient restructuring of the agricultural ministries going against the clear need for a systems approach to agricultural services support; the problem with the decentralization getting stuck at a problematic halfway point; the failure to address promotion and incentives problems for district level extension staff; and the government imposed constraints on farm profitability in the form of export bans.[34]

5. Sector Overview: Current Issues and Future Directions

Background

5.1 The sector descriptive background material is presented briefly in the opening section of the report, prior to the three project assessments, and therefore is not repeated here.

5.2 In this final section the report seeks to answer the following ten questions:

- How did the Bank program, both policy support and investment, evolve over the assessment period?
- Did the Bank follow an effective sector program strategy, in other words did it do the right things? (Relevance)
- Did the Bank plan and implement the chosen projects well, in other words did it do things right? (Efficacy and Efficiency)
- What were the borrower's priorities over the period of review?
- What was the Bank's role in policy reform?
- To what extent did the Bank interventions impact the sector? (Attribution)
- Did the Bank ensure country buy-in? Or did it unduly force its particular reform vision?
- Did the Bank coordinate effectively with other donors?
- Did the Bank learn sufficiently from earlier program or project lessons?
- What lessons for Bank management do the findings offer?

5.3 **Methodology**. The methodology involved: (i) qualitative review of all the relevant PADs, ICRs, PPARs, and IEG ICR Reviews (given the small numbers and the spread of sub-sectors and purpose, quantitative tabulations were not considered useful); (ii) review of the

34. Maize exports to the very lucrative markets in Kenya and Malawi are banned, putting maize growers, often the poor, at a disadvantage against cash export crop producers where markets have been liberalized.

main literature; (iii) discussions with a limited selection of current or former Bank staff; (iv) discussions in country with a limited number of government, borrower institution, Bank, donor and NGO staff;(v) review of all formal and informal sector work available; (vi) review of key government documents; (vii) analysis of Bank project performance data; and (viii) review and categorization of project lessons for closed projects.

Government Sector Strategy

5.4 The current Tanzania agricultural sector strategy is contained in the October 2001 Agricultural Sector Development Strategy. It lies within the larger MKUKUTA (Swahili for the PRSP) framework. Prior to this strategy there was the Agricultural and Livestock Policy and the Cooperative Development Policy of 1997 which had as its major objectives: food security; improved rural living standards; increased foreign exchange earnings; sustainable use of natural resources; development of human resources; and access of women to land, credit and education. Prior to that, the main strategic statement appears to be the letter of Development Policy associated with the FY 1990 Tanzania Agricultural Adjustment Credit (TANAA), the main element of which was a commitment to liberalize marketing and pricing for export crops. In the 1980s the government's Agricultural Policy (of 1983) provided the strategic framework with its four main objectives: (i) to provide sufficient food for the growing population; (ii) to generate foreign exchange; (iii) to supply domestic industries with raw materials; and, (iv) to raise rural incomes and alleviate poverty.

5.5 The primary objective of the latest 2001 agriculture strategy is stated as being: "to create an enabling and conducive environment for improving the productivity and profitability of the sector. This will serve as the basis for improved farm incomes and rural poverty reduction in the long term, while contributing to the medium-term and long-term goals of the Poverty Reduction Strategy Program."[35] The main elements of the diagnosis are: the low productivity of land and labor; poor coordination on policy and implementation; weak marketing, processing and production chains; the high cost of transportation; the erosion of the natural resource base; and the reduction in human capital caused by HIV/AIDS. The strategy is built on the overarching government objective of poverty reduction. It acknowledges that the need to achieve macroeconomic stability rules out the possibility of profligate expenditure or subsidies. It also notes that the strategic options are influenced by the on-going Local Government Reform Program that gives a substantially larger role to the Local Government Authorities.

5.6 The strategy notes a number of strengths in Tanzanian agriculture including: comparative advantage in a number of major export and food commodities; a substantial human capital base; underused natural resources; political commitment to agriculture; and membership of regional and international trade groupings. It notes that Tanzania is, for the most part, a food self-sufficient country but that there remains potential to increase production of wheat and rice to replace imports and to expand livestock exports. Somewhat lowering the targets set for the PRSP, the strategy has a target of achieving a 5 percent

35. Interestingly, while it refers to the Agricultural and Livestock Policy of 1997 and notes the first element of that policy as being to "assure food security for the nation", the 2001 strategy does not focus on food security, it focuses more on productivity and the means to achieve it.

growth rate over the three-year period 2005 to 2007. It emphasizes three innovative features. First, a focus on agricultural productivity and profitability. Second, the promotion of private sector/public sector and processor/contract grower partnerships. Third, the implementation of the strategy through District Agricultural Development Plans. This last presents the dilemma that, once the majority of resources are shifted into district hands and plans become district-driven, there is limited leverage remaining with the center to cause districts to adhere to any centrally formulated agriculture strategy.

5.7 The strategy for research and extension is of particular relevance to this review. The strategy for *research* is to accelerate the process of transferring responsibility for funding export crops to the private sector, the sharing of agricultural research funding between the central government, local governments, commodity boards and private sector, and the strengthening of the national research policy committee which manages the National Agricultural Research Fund. It proposes a return to the "focus and concentrate" strategy that it notes resulted in breakthroughs in the 1960s and 1970s. It proposes, rather optimistically, significant funding from local governments into the Zonal Research Funds.

5.8 The strategy on *extension* is to give primary responsibility to the LGAs with the majority of financing coming from the center and the LGA. LGAs are to coordinate both public and private providers of extension "to ensure all stakeholders are served". A proportion of the central government funds are to be allocated to the National Extension Fund which LGAs would compete for. LGAs were expected to enter into partnership and cost-sharing arrangements with outgrower and contract schemes which might involve the secondment of extension staff. In rangeland management there was to be demarcation and allocation of land to be used by pastoralists.

Bank and Agriculture in Tanzania

5.9 **Strategic Work.** Three CASs set the elements of a broad rural strategy for the period under review. These were backed up by a limited amount of agriculture-related economic and sector work. While necessarily somewhat limited in detail, the CASs were generally consistent with the borrower's stated priorities, although there is some evidence that, particularly earlier in the period under review, government was more focused on food self-sufficiency and the Bank more focused simply on sector efficiency.

5.10 The 1994 CAS focused on four issues, the unstable fiscal environment, the scope of the development program, inefficient use of funds and constraints to the private sector, and weaknesses in implementation. By May 1996 action had been initiated to reduce restrictions on agriculture including mainly marketing, processing and trade restrictions.

5.11 The 1997 CAS noted that increased agricultural output had come mainly from acreage expansion with yields remaining generally below the levels obtained in the 1970s. At the time the government's Medium Term Development Strategy called for expansion of agricultural production at 5 percent through yield enhancing inputs with some increase in cultivated area, and from the development of non-farm activities, and improved social services. The Bank strategy was in broad agreement with this, emphasizing raising agricultural productivity, promoting off-farm activities, and improving the environment for private sector growth. There is some evidence in this CAS of learning related to agriculture

from the performance since the previous CAS. The CAS listed research and extension, rural access roads, water resource development, and the links between social and economic services, as the most important elements. There was also a focus on environmental quality which appears stronger than in the government strategy. However, this CAS still had many weaknesses. It was criticized by IEG in its 1998 sector assessment for not giving sufficient attention to export crops given the high growth target which could only be achieved with high export growth. IEG noted that the growth of export crop production in Tanzania could have a significant impact on poverty.

5.12 The CAS was more strongly criticized in the IEG 1999 report *Rural Development. From Vision to Action?* in which Tanzania is rated last with three other countries out of 20 countries reviewed for an overall rating on the quality of Bank's rural development strategy. The report stated (Annex D) that the 1997 Tanzania CAS "contains no rural strategy worthy of the name... It seems clear that the knowledge base for developing a rural strategy for Tanzania is quite inadequate. What really are the prospects for technological improvement and profitable marketing in the agricultural export sector? .... The idea of "farmer-driven-research" has appeal if the alternative is irrelevant research, but even well informed farmers need guidance of experts on research which departs from existing ways of doing things but may, for that very reason, be highly productive."[36]

5.13 The CAS noted a number of lessons including that the sustained dialogue on the divertiture of parastatals had contributed to performance and that the past program had not given enough attention to reforming public sector institutions and helping to build the skills required for a market-oriented economy. The CAS also noted that the Bank had not been sufficiently active in involving NGOs and building institutions that would stimulate decentralized development. Performance of projects had been a serious problem with the share of "problem projects" increasing steadily, but this was partly attributed to recent greater realism in ratings. Two rural and agriculture projects were proposed in the lending program out of a total of ten projects over the period FY 98 to FY 00. (The NALRP, the ASMP, and the NAEP II were already in the lending program and under implementation, or nearly so). The proposed projects were focused on rural water and agriculture but little detail is offered so it is not easy to link them to the subsequent projects that emerged. The case for the priority of these particular projects in this CAS in relation to the strategy is not self-evident. We concur, therefore, that this CAS did not offer a rural strategy.

5.14 The June 2000 CAS is a document of more substance but it is still not very clear how the agriculture projects were chosen. It notes the deterioration of social indicators and the lack of income opportunities for the poor in rural areas. The government strategy at this point rested on three pillars: first, creating higher growth and economic opportunities for the poor; second, building capacity; and, third, increasing empowerment and accountability. The CAS called for the development of an environmentally sustainable rural strategy with three objectives: (i) conserving the natural resources on which the poor depend; (ii) commercializing agriculture; (iii) increasing linkages with urban areas to create income opportunities. While these are not unimportant for rural development, they appear somewhat out of focus against the priority objective of poverty alleviation. First, the conservation of

36. This reflects a point made earlier in this report on the research project.

natural resources has usually offered only longer-term benefits for the poor. Second, the commercialization of agriculture would be relatively more focused on the less poor farmers. Third, the support for urban areas, while by no means irrelevant to the rural poor, was probably likely to have lower immediate impact than direct rural interventions.

5.15 At the time of this CAS, IEG in its 2000 country assistance evaluation (CAE) noted that there was a need to intensify focus in the rural strategy on constraints to agricultural production. The CAE characterized these as being predominantly in the area of those services that now faced, or would soon face, a hiatus following the reforms, in particular, filling the marketing, input and credit supply void left by the dismantling of parastatals which the private sector was so far largely failing to achieve. Such a focus was not really strongly evident in the language of the CAS. The lending program for FY01 to FY03 did include a Rural Water LIL, a Soil Fertility Project (which later mutated into the Participatory Agricultural and Empowerment Project (PADEP)), a Forest Conservation Project, and a second Lake Victoria Project focused on environmental issues. It is not entirely clear how this lending program would focus on constraints to production. Soil fertility certainly qualifies but, in the end, this proposed project did not eventuate. Forest conservation, while important, appears somewhat peripheral to the central productivity strategy. Rural water certainly contributes to productivity but may be less cost effective than alternative options. Improving the environment of Lake Victoria is also not strongly related to enhancing agricultural production although of definite relevance to sustainability. In the event, the PADEP emerged with an objective to raise productivity of food and incomes through community empowerment.[37]

5.16 Surprisingly, since the time of the 2000 CAS, there has been no overall Bank strategic document. In accordance with the new Bank Tanzania approach to enhance donor coordination and to consolidate Bank and borrower strategies, the intention is to prepare a joint strategic document with donors and the borrower. This is not expected to be finalized until early 2007. This would mean a gap of four years from the stated validity period of the 2000 CAS which was given as 2003. This seems an excessive gap in strategic guidance over a period of rapid change in policies. With respect to more recent projects, the Agricultural Sector Development Project (ASDP) was developed. This is a loosely defined basket-funding approach on a large scale. The appraisal report does not present much evidence that institutional capacity in Tanzania matches the challenge of making sound and timely decisions. This is discussed again later.

---

37. The PADEP supports capacity building at the district level and matching grants at the community group level developed through participatory planning processes to support sub-projects such as watershed management and soil fertility restoration using rock phosphate, no tillage techniques, integrated plant nutrient management and integrated pest management, livestock improvement and marketing. Subproject approval is by the District Management Team. While PADEP provides some funding for the operation of the extension service at the district level, it does not appear to resolve the outstanding issue of post-project sustainability. The original proposal from the CAS to support a soil fertility project was rejected on the grounds that it focused too much on one input (inorganic fertilizer) rather than offering support for an open menu of technologies at the community level and it was insufficiently focused on participation by communities. (It is not entirely clear why it should have been so narrow.) The extent to which PADEP will now achieve results on the issue of soil fertility remains to be seen. Since the matching grant proposal covers the full menu, it seems probable that investments with longer-term benefits such as rock phosphate for soil fertility will not feature high on the priority list of the poorer households.

5.17 Overall, the review of CASs and the agriculture lending programs suggests some weaknesses in carrying the strategic logic of the CAS through into the lending program. There needs to be an explicit theory-based logic between, on the one hand the strategic and sector goals of the CAS, and, on the other hand, the proposed project lending list. The absence of such links reduces the value of the CAS as both a sighting mechanism and a filter for the structuring of sector lending programs. It leaves the impression that the strategy and the list of projects are developed largely independently and forced together afterwards. There is rarely evidence in the CAS of selectivity, of what was rejected.

5.18 **Sector Work.** There were several major sector studies and a number of smaller contributions to strategic thinking by the Bank over the period of review.

5.19 In 1992 there was a mission for a *Tanzania: Agricultural Sector Review* which provided input into the ASMP design and was finally published in 1994 as a GOT/Bank study entitled *Tanzania Agriculture.* The diagnosis of this rather wide-ranging and unfocused report was, briefly, the following: that expansion of land area was still possible if guided and assisted; that a focus on export crops, since world markets could absorb increased production, would be important; that roads were important to reduce costs but in new areas should be carefully located; that the information base was poor; that the decline in commodity prices had implications for taxation of export crops and efficiency more generally; that the ineffectiveness, disorganization and insufficient expenditure in public research and extension had reduced the generation of technologies; that sustainable use of soils, water, forests and wildlife was important; that restrictive legislation for private sector entry should be repealed;[38] that policy formulation capacity in the ministry needed to be strengthened; that there was a need for agreed and public rules for government intervention through the Strategic Grain Reserve; and, that all input markets should be liberalized.

5.20 Some of the main strategic recommendations were:

- Expenditure on agricultural research and extension should be approximately doubled. (It was not).
- Salaries in research and extension should be raised and adequate operating costs provided. (They were not).
- The liberalization of the traditional export crop markets and divestiture of parastatal crop processing agencies should be completed. (This was done but at a slower pace than the very optimistic pace planned).
- Improving management of the Strategic Grain Reserve, including a procedure for grain release and pricing, and liberalization of agricultural inputs (This was partially done but now the fertilizer subsidy has re-emerged).
- Outside agriculture, continued rehabilitation of the rural roads network was recommended including the opening up of strategic areas through new roads to foster agricultural development. (This does not seem to have been a significant focus since).

38. In 1993 an amendment to the Crop Marketing Boards Act permitted private entry into marketing and processing of coffee, cotton, tobacco and cashew nuts.

5.21 Proposed projects under this study included (in what was said to be a tentative order of priority): agricultural research and extension, water resources management, wildlife, rural financial markets, export diversification, and livestock sector project and monitoring and regulation of a private sector fishing industry. As in the CASs, there does not appear to be any formal procedure, open to peer or management examination, for prioritizing and filtering even a modest array of potential project alternatives under this study. It is concluded, therefore, that the problem discussed earlier about the limited logic in the leap from the strategy to the lending program in the CASs stems at least partly from the same weakness further back in the sector work.

5.22 In 2000, there was a significant agriculture sector study done jointly by the Bank, GOT and the International Policy Research Institute entitled *"Agriculture in Tanzania since 1986: Follower or Leader of Growth?"* The Preface of this study notes that there were contrasting views about the performance of Tanzania's agriculture summarized in OED's 1998 sector assessment (discussed below). It was pointed out that there were serious discrepancies between various national and international sources of production estimates and that national accounts, prior to revisions, indicated a high-growth performance averaging nearly five percent annually while production data showed performance to be stagnant. It was because of the contrasting views about performance that an independent and reputable institution such as IFPRI was engaged to contribute to the sector study. This study did find significant data inconsistencies, albeit with some improvement in recent years. Estimated agricultural GDP growth was 3.3 percent since 1985. The report noted a fairly respectable growth rate of maize production of 2.4 percent given the decline in real producer prices and increasing fertilizer prices.[39] The study found (using domestic resource cost ratios - DRCs) that Tanzania has a strong comparative advantage in maize, paddy, and all the traditional export crops. It was also found that livestock products may offer one of the best long-run potentials of widespread applicability. Major growth linkages were found with the non-farm sector, mostly consumption linkages. Surprisingly, light manufacturing had a smaller effect on urban incomes than did export cash cropping partly due to labor intensity. The report expressed concern about the renewed sharp appreciation of the exchange rate since 1993 which had a greater impact than world prices or liberalization on real producer prices. Agricultural research and extension were found to generate higher returns on investment. It was concluded that relying entirely on private sector research was not an option.[40]

5.23 This was a very strong piece of sector work and although it is difficult to trace the attribution, it almost certainly played a useful role in channeling strategic thinking within

---

39. It also noted that, while export crop production had expanded only 1.8 percent per year over the late 1980s, this had increased to 7.7 percent growth in the 1990s. Fertilizer use had fallen by about half as a result of subsidy removal and lower crop prices. However, the impact on national maize production was found to be modest (less than 5 percent) partly due to the low initial use of fertilizer on food crops. The study found that just five percent of Tanzanian farmers obtain credit from long-term resources. It found that farmers who grew cash crops have higher incomes than those who do not, even after holding farm size, education, and other factors constant. It found that income increases going to export crop farmers are associated with increased food consumption among this group.

40. In the case of non-tradable food crops productivity, increasing research was most likely to lower market prices with benefits shared between producers and consumers. Transportation costs in rural marketing were found to be very high and if lowered would raise producer prices and lower the cost of inputs.

government at this critical time. A number of short-term measures to stimulate agriculture were proposed in this study:

- First, excessive taxation of agricultural production and marketing by local authorities should be reduced. Tax burdens of 30 to 60 percent on the major traditional export crops were found. (These were later reduced).

- There should be a permanent lifting of the ban on food exports. (This was not done and the ban is still in place today with some modification). The effect of export liberalization on poor consumers in deficit areas was estimated to be minor and therefore could be offset by direct assistance.

- The facilitation of credit provision was considered important. It was proposed that it should be provided by crop buyers, banks, and cooperatives rather than government. The interest rates should not be subsidized. It should target commercial crops for which inputs were profitable. The government role would be in the creation of groups, the facilitation of a credit system, and information provision. (There has been limited progress with microfinance institutions but the creation of savings and credit groups is now, some years later, moving quite strongly). Well-designed subsidies to lending institutions catering to small farmers were considered justified. There was concern that food aid may not be serving the interests of equity by making food markets less predictable and lowering returns to poor farmers.

- Better data was called for on horticulture, minor crops, small-scale animal agriculture, fertilizer use, food consumption patterns, the distribution of poverty, interregional markets, and trends in nutrition. (Data has somewhat improved but remains quite weak and public availability is limited).[41]

- Finally, the report called for greater budget for agriculture. There had been a decline in budgetary support for the Ministry of Agriculture and Cooperatives. The 1999/2000 estimate was almost one third lower in real terms than the average of the first three years of the period under review by that report i.e. from 1986. The report noted that savings from eliminating fertilizer subsidies and divestiture of loss-making parastatal activities had not been reallocated to agricultural research, extension and marketing. Over the period 1991 to 1999 MAC spending, including development spending, averaged just 3.5 percent of total central government expenditures. This was considered minimal when compared to agriculture's contribution to export revenue (at least 45 percent), to gross domestic product (minimum of 47 percent) and to employment (84 percent).

5.24 In 2005, there was a very useful *Diagnostic Trade Integration Study* prepared under the Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries program (a multi-donor program established by WTO trade ministers in 1996).

41. The GOT Publications Office is the poorest the mission has encountered. Most material relevant to rural development seems to be out of print including the current rural strategy. Two Tanzanian visitors spoken to who had come to Dar from far away for various references left without any of the documents they came for.

This was led by the World Bank Africa region. The study called into question the poverty impact of trade since there had been a significant decrease in traditional exports yet agriculture generates over 80 percent of employment and 80 percent of the poor live in rural areas. There were complications due to Tanzania's membership of more than one regional trade arrangement and issues with their trading negotiations with the EU. The main internal points to be addressed included: reducing transport costs, rationalizing and reducing agricultural export taxes, reforming crop boards towards only handling regulation, data, and public services such as extension, enhancing skills, building capacity on phyto-sanitary standards, reforming customs, and greater private sector involvement in giving feedback on policy dialogue impacting their commodity.

5.25 In addition to these major studies there were a number of smaller papers with relevance to agriculture strategy including: World Bank Findings "Reform Experience with the Tanzanian Cotton Sector, 2005 and a similar note on coffee; an Africa Region Working Paper Series No. 70 on cashew, the 1997 World Bank Technical Paper No. 370 on Land Degradation in Tanzania; Africa Region Working Paper No. 69 on the Tea Sector; and a few others.

5.26 With respect to other main relevant studies, in 1998, IEG carried out a review entitled, "Tanzania, Agriculture and the World Bank. The main findings were: (i) that the 1997 CAS did not show how the proposed agricultural growth of five percent a year could be achieved and IEG concluded that this could only be achieved with rapid export expansion; and (ii) that the Bank was lagging in awareness of how the government and other donors (who were providing the majority of funding) dealt with policy and institutional constraints. The main recommendations were: (a) the Bank needed to use meaningful agricultural statistics and to rebuild the agricultural analysis; (b) M&E should be enhanced *(a recommendation that has been repeated continually for many years –our comment added)*; (c) divestiture targets should be set according to expected pay-offs in growth and the feasibility of implementation; (d) extension should move towards a pluralistic approach with cost-sharing and participation by farmers and NGOs.

5.27 **Tanzania Compared with Vietnam.** Beyond the Bank sector work, there have been some useful outside contributions relevant to the strategy debate. In particular, in an Economic and Social Research Foundation working paper by Van Arkadie and Dinh, (2004), the better performance of Vietnam compared with Tanzania was examined. Vietnam went from being on the edge of famine to being one of the three leading rice exporters and a leading coffee exporter. In particular, the paper examined why poverty levels were seemingly more stubborn in Tanzania. Vietnam had achieved much greater success in increasing agricultural productivity. It had invested substantially in rural infrastructure and services to facilitate productivity. The combination of public and private support in Vietnam appeared to have been better balanced and phased than the almost exclusively private ownership approach in Tanzanian reform. The Vietnam strategy had the advantage of maintaining continuity, preserving productive capacity and management capabilities while attracting additional resources through joint ventures and new investment. The paper argued that, when a private sector is weak, it is wrong to virtually abandon a state sector. Although the Vietnamese State Owned enterprises still face many problems, the fact that only 30 percent of them continue to make losses indicates the potential for state owned enterprises to

contribute to development.[42] Vietnam had adopted a more nuanced, pragmatic approach than Tanzania. It was argued also that the social services dominated strategy in Tanzania required that government, first, was able to collect taxes, which had been a long-standing weakness in Tanzania.[43]

5.28 **Bank Lending and Performance.** In addition to the three projects covered by the PPARs in this report, there are six other closed projects in the agriculture category as noted in Annex A which also provides a brief summary on the project objectives and performance. The Annex also provides information on the five ongoing projects. The last, the large basket funding sector project, has only recently become effective.

5.29 Reviewing the five ongoing projects, the main changes over the earlier series of closed projects are: (i) the shift in 2006 to basket funding; (ii) an increase in participatory approaches (Forest Conservation, Participatory Agricultural Development and Empowerment Project (PADEP), The Tanzania Marine and Coastal Environment Management Project, and some elements of the Agricultural Sector Development Project (ASDP) which can arguably be partly associated with an increase in explicit poverty focus; (iii) an increase in focus on environment, although not particularly in the earlier proposed agriculture direction of soil fertility except perhaps for portions of PADEP (should communities choose); (iv) a less hands on approach to research support i.e. no repeat research project; (v) a substantial allocation to a non-land activity, i.e. the marine intervention; (vi) arguably somewhat less institutional policy reform focus now that some of the main institutional issues have been addressed e.g. parastatals; and, (vii) greater expectations of the private sector role. Beyond these five projects, another, the 2005 *Rural and Financial Services Project* should be mentioned. It is not classified as agriculture but is clearly highly relevant. The realistically-formulated objective is to develop a common policy framework, based on international best practice, that will establish an enabling environment for rural microfinance and increase the quality and returns of the many follow-on investments planned by government and donors. It seeks in particular to develop skills and institute tracking of the various initiatives against common criteria.[44]

5.30 Table 5 shows total Bank lending and lending to agriculture and, four year average agriculture percentages. Total lending directly to agriculture over the 16 year period under review totals US$437 million. However, US$206 million of that is the latest ASDP. Up until then the annual average for agriculture was only US$15 million. Between FY93 and FY02, a low period, agriculture lending averaged only about US$6 million per year. These seem low lending volumes for a potentially productive sector with such relevance to poverty. Note that the agriculture figures are based on the percentage of agriculture lending within projects with

---

42. One example is VBARD, the national rural bank, which, notwithstanding periods of losses and help with subsidies, has reached huge numbers of poor farmers quite efficiently and remains a saleable business given some further policy changes.

43. Another paper by Danielson entitled "Growth Without Poverty Reduction?" (2004 Lund, Sweden) concluded that the Tanzania PRSP and the GOT strategy neglected agriculture and rural roads in favor of the social sectors, with these two rural sectors receiving only around 10 percent of all priority expenditures.

44. This is an important objective in a learning project. As noted earlier, assessing against common criteria is something that is not being done adequately in Tanzania with the pluralistic extension activities.

Table 5. Tanzania Agriculture Lending as a Percentage of Total Lending

	ALL SECTORS		AGRICULTURE PROJECTS			
	No. of Projects	*Total All Lending (US$m)*	*No. of Projects*	*Total of Projects with Agric. (US$m)*	*Lending to Agric. (US$m)*	*%Agric to Total for All Lending by 4 year periods*
FY91	2	136	0	16	14	
FY92	4	251	2	230	21	
FY93	4	341	0	11	0	
FY94	2	195	1	25	9	5
FY95	1	13				
FY96	2	116				
FY97	4	196	3	68	23	
FY98	2	45	1	22	6	8
FY99	1	42				
FY00	6	330	1	190	13	
FY01	2	76	0	1	0	
FY02	5	402	2	43	11	3
FY03	3	250	2	189	72	
FY04	5	451				
FY05	3	356	1	154	63	
FY06	8	751	4	491	206	19
Total	**54**	**3949**	**17**	**1438**	**437**	11

an agriculture component. The total project costs of projects with agriculture components were higher. With respect to percentages, agriculture lending fluctuated around 5 percent of total Bank lending through the 1990s but then jumped to close to 20 percent over the last four-year period. Again, the earlier level of around 5 percent appears low for a country in which agriculture accounts for nearly half of GDP, with a need to enhance technology, and for a sector supporting the majority of the poor. While other investment in rural infrastructure and social services also contributes to the welfare of poor rural households, the key to the targeted high level of growth that will sustain such investment lies substantially in increases in agricultural productivity, including particularly smallholder export crops. Striking also is the low share of expenditure on agriculture in projects classed as having agriculture elements (30 percent now, but up to FY05 only 24 percent). The three reviewed projects in the PPAR section of the report represent a little under 20 percent of the agriculture lending over the full period of review.

5.31 **The Shift to Basket Lending.** Very recently, there has been a change in the approach to sector support in Tanzania. With the new FY06 ASDP, the Bank has played a central role in moving towards "basket funding" in which the Bank and other donors who buy into the approach agree with the borrower on the overall strategy and the broad elements of the investment program and then place their funds into a common basket with agreed

government processes to allocate funding. Under this new approach, the Bank and donors would remain largely outside detailed intervention design. The intent is to stand back more than in the past and leave management of the sector in Tanzanian hands. This is seen as a pilot before a further shift towards full general budgetary support for the sector.

5.32 There are some questions whether the past performance in Tanzania in this sector warrants such a hands-off approach. In the appraisal document, the argument in favor of this approach is only lightly covered. Given the importance of sectoral management capacity and, arguably, the weakening of that capacity until district planning skills can build, the limited exploration of the sectoral capacity to manage a basket funding approach is of some concern.[45] Clearly there are some aspects of implementation where no further institutional responsibility options remain open. For example, if resources are to be passed to the field level then local government structures, however weak, must play the central role, and detailed planning for implementation at that level by some higher level or donor is no longer feasible. Nevertheless, basket funding management does place additional burdens on sectoral management at several levels. To some extent in the ASDP the designed processes are self-correcting since, if districts cannot perform, they will receive less money under ASDP. Nevertheless, the shift from carefully designed interventions to this looser basket funding modality appears risky against current capacities. While donors involved have gone along with the approach, this is not without some misgivings. A key factor in these decisions appears to be the need to reduce donor administrative costs. For example, DFID in Dar es Salaam no longer has anyone who handles agriculture and rural sectors specifically.

The Main Lessons of Lending Reported In ICRs

5.33 The lessons learned from the sample of completed projects selected can be grouped loosely into nine categories related to the following: sustainability, stakeholders, sequencing, project design, Bank management, incentives, decentralization, M&E, and donor coordination.

5.34 On *sustainability*, the Poverty Reduction Support Credit I (PRSCI) findings suggest that, for sustainability, it is important to strengthen government processes rather than to circumvent them. The Forest Resources Management Project found that special arrangements, such as PCUs and staff allowances, may have helped temporarily but did not contribute to sustainability, and, looking outside the immediate agriculture-based sample, in the Tanzania Rural and Microfinancial Services Project, it was found that mainstreaming project activities into the core work program of the leading institution had helped.

5.35 On *stakeholders*, the Programmatic Structural Adjustment Credit (PSAC1) findings suggested the need for an effective strategy to address stakeholder concerns, the River Basin Management Project found that there was a need to be sensitive to local differences in

45. Annex 16 of the PAD notes the need to: operate within government systems to avoid setting up parallel processes; reduce transaction costs between government and development partners; and shift accountability more towards the relationship between government and citizens. These appear to be commendable objectives. However, the Annex then jumps to the prerequisites for taking basket funding further towards general budget support. There appears to be limited supporting analysis in the PAD of GOT capacity at different levels and how that has influenced the project design.

practices, preferences and customs in water issues, and the Forest Resources Management Project found that all the different institutional stakeholders needed to be committed to reform for it to succeed.

5.36 On *reform sequencing*, the PSAC1 findings indicated that there was a need for the Bank and the borrower to better understand the individual steps and sequences in the privatization process. The ASMP finding was that overarching national reforms may be needed ahead of sector reforms. The Financial Sector Adjustment Project finding was that liberalization could come too early, before an effective legal and regulatory framework was in place and also that directed credit may be hard to abandon while a large state-owned Bank remained dominant.

5.37 On *project design*, the River Basin and Smallholder Irrigation Project findings were that there was a need for a comprehensive approach to agricultural productivity which included agriculture, water, and infrastructure. The NAEP II project findings concluded that, in project design, public funding should be distinguished from public provision of services. The ASMP findings concluded that there was a need for simple project design and clear definition of the roles of each party. The Forest Resources Management Project findings concluded that intensive project preparation and appraisal and substantial supporting studies had paid off but that weaknesses in project performance were linked to inadequate institutional mechanisms with decentralized responsibility without oversight or capacity. Again, going outside the immediate agriculture sample, the Rural and Microfinancial Services Project found that it was important to have carefully designed complementarity among components and that simplification of procurement procedures, or alignment with national procurement procedures, would have helped (echoing findings in a number of projects about procurement).

5.38 On *Bank management*, the NAEPII findings were that Bank management should allow for more open debate between management and staff on leading disputed strategic issues (this was in reference to the feeling that senior management had imposed the T&V extension approach on staff who were starting to question its viability).

5.39 On *incentives*, it was concluded from the ASMP project that, in designing the reform of a government agency, it was important that the agency as a whole and individual staff should see incentives for participation in the reform. In TARP II there was also found to be a need for incentives to retain a critical mass of experienced researchers in the public research service.

5.40 On *decentralization*, in TARP II, the lessons suggested that, beyond the immediate decentralization of technical program control, it was important to complement this with parallel decentralization of management, finances, and procurement.

5.41 On *M&E*, it was found, in relation to TARP II and some other projects, that it was important to define the key indicators early in order to be able to incorporate the approaches to measuring the evidence into the project design.

5.42 Finally, on *donor coordination*, the PSAC1 concluded that there was a particular need for donor coordination when complementary Technical Assistance was being provided, and a

lesson from the Rural and Microfinancial Services Project was that having significant donor financing itself had greatly helped with donor coordination in the sub-sector.

5.43 There is some evidence from the project assessments in this report that lessons have been recorded but not entirely acted on. As evidence of this, there have been a number of very persistent issues including those related to financial sustainability, M&E, capacity development, seed supply, and trade in which progress has been modest over the years despite frequent earlier lessons on the need for action. Some lack of appreciation of global lessons relevant to Tanzania is also evident, for example in the over-optimism of retaining released funds from ministry downsizing for operational costs, and, more generally, the lack of realism about the rate of reforms which we argue could have been better forecast even with existing knowledge.

The Bank's Role in Agricultural Policy Reform

5.44 Over the period under review, there is evidence that the Bank played a significant role in Tanzania in both dialogue on, and support for, agricultural policy reform. More of this appears to have come from the preparation phases of projects in the lending program than from economic and sector work but both played a role. More specifically, the Bank has played significant roles in the following areas:

- Divestiture of parastatals and government owned farms, although it should be said that this process has been very drawn out and with sequencing problems and spanned the period of several projects. (The complexity and steps needed were never adequately understood and planned for by either the Bank or the borrower).[46]
- The transition toward privatization of research.[47]
- Decentralization, including in the case of agriculture early attempts at District Agriculture Development Plans.[48]
- Reform of the central agriculture ministries into leaner agencies focusing on core tasks.[49]
- Marketing and trade more generally, including the dialogue on particular commodity board issues.[50]
- Possibly land reform, although to a lesser extent than those above.[51]

---

46. Ministry staff had found the Bank's dialogue on divestiture over the years to have been of value, except that there were some concerns that there had been insufficient attention to the need for entrepreneurial skills and supporting services for privatization. (These were particularly noted in the Government Completion Report for ASMP).

47. Research managers had favorable comments about the Bank's contribution to the dialogue on their formal research and noted that the Bank had brought in many ideas from its global and CGIAR experience.

48. The mission's (limited) observation was that the District Agriculture Plans were very weak, largely just shopping lists, but that the overall District Development Plans, including log frames, were better, the difference presumably reflecting capacity building gaps.

49. Ministry staff felt that the Bank had made a very positive contribution in the development of their reform plans and responded that the Bank had not pressurized them into a strategy they did not want.

50. The mission heard favorable comments about Bank input on cotton processing and marketing.

- Management of rural infrastructure, including maintenance approaches for rural roads.
- Participatory approaches in general particularly in association with PADEP.
- Policy dialogue on rural and micro-finance in association with the Rural and Micro Financial Services Project (a LIL) effective in June 2000, mostly implemented by the Bank of Tanzania.[52, 53]

5.45 **Policy Role in the Three Projects Assessed.** Referring now more specifically to the three projects reported on earlier, the areas of the Bank's role examined in these three cases include overall strategy, policy reform, public and private investment, research, extension, donor coordination, and poverty.

5.46 On the role of the Bank in *overall strategy* and policy reform associated with these three projects, the main strengths have been that there was strong dialogue with government and other donors through most of the period under review. There was some important analytical work by the Bank over the period. There is evidence in the files of continuing dialogue, much of it emanating from the Dar es Salaam Office. There is evidence that the Bank brought global policy experience in some areas, for example, in relation to research, extension, marketing, community-driven development and microfinance. However, there are some questions about whether such a "big bang" approach to divestiture was appropriate. For example, Dejene, Sishara, Yanda, and Johnsen (1997) note that fertilizer use in developing countries has fallen substantially in countries that followed the "big bang" approach (Ghana, Zambia, Poland, Russia) whereas in Bangladesh, where retailing was privatized first, followed by wholesaling, followed by fertilizer importation over 13 years, there was an 8 percent fertilizer increase annually over the period. This compares with the rapid dismantling of the Tanzania Fertilizer Corporation to make room for a small private sector with limited transport, storage and marketing capacity and skills. In similar vein, the case of Vietnam was outlined earlier.

5.47 On the role of the Bank in *public and private investment* in agriculture, the main strengths have been the support for the development of an enabling environment and the dialogue as a whole, and research privatization and divestiture of parastatals. The main weaknesses have been similar to those noted in the preceding paragraph including insufficient attention to capacity in the private sector and the long-standing issue of sustainability.

5.48 On the role of the Bank in *research* policy, the main strengths have been in offering experience in privatization, management, research/extension coordination mechanisms, prioritization mechanisms, and client feedback mechanisms. The main weaknesses have been that, after so many years of sustainability problems, the Bank still did not make much

---

51. See the earlier discussion of land reform. There is little evidence of Bank involvement more recently although need for attention to land policy had been referred to in some of the earlier Bank agriculture ESW documents.

52. See Bank ICR dated June 30, 2005.

53. See also World Bank Note Findings on Microfinance Regulation – Lessons from Benin, Ghana and Tanzania October 2004.

progress on financial sustainability in terms of matching the scale of research services with the scale of funding. While the Bank did support a strategy for privatization of export commodity research to pull in additional funding, this shift did not release resources for a significant increase in food crop research. Also, limited progress was made in supporting regionalization of research to reduce individual country burdens, an approach that had considerable pay-off prior to independence.

5.49 On the role of the Bank in *extension*, the main strengths are difficult to assess. On the one hand, more recently, the Bank contributed global experience on pluralistic approaches. But on the other hand, the Bank supported, and strongly pushed, T&V. This left a legacy of budgetary sustainability problems, client-feedback weaknesses, and excessive system rigidities.

5.50 On the role of the Bank in *donor coordination*, the Bank has worked quite closely with donors and they have generally been happy with the Bank's readiness to consult and share, although a few have decided for now to stay outside the basket funding perimeter. The main weakness has been that the Bank is seen almost universally as being less flexible than other donors in adapting procurement procedures to common approaches.

5.51 On the role of the Bank in focusing on *poverty*, the main strengths have been the support for the PRSP process, the focus on food crop research, the support for client feedback (although there remain weaknesses in getting feedback from the poorer clients) the support for participatory forest management approaches and private tree planting under the Forest Resources Management Project, and the support under projects such as PADEP for community approaches. The main weaknesses have been the limited focus on agriculture in the PRSP, the limited attention to the impact of reforms at the farm household level, and the continued weakness in public extension which is the only technology source option for the most poor.

FINDINGS

5.52 In this section the report attempts to summarize the answers, as far as the evidence permits, to the ten questions posed for the sector review.

5.53 **How did the Bank program, both the policy support and investment, evolve over the assessment time period?** The program evolved along several axes. First, quite early on in the period under review, it evolved from more traditional investment projects to greater attention to sectoral policy reform. Second, it evolved from institutional reform at the center to institutional reform at decentralized levels, for agriculture an inevitable shift following government's decentralization decision which was supported by the Bank. Third, it evolved towards increased client participation and feedback at field level e.g. through the PADEP, an empowerment-focused project. Fourth, it evolved from traditional project lending in the direction of basket funding e.g. the new ASDP. Fifth, it evolved towards somewhat greater attention to rural poverty through the PRSP process. For example, TARP II and PADEP gave considerable attention to food crops.

5.54 **Did the Bank follow an effective sector program strategy, in other words did it do the right things? (Relevance)** Overall, the Bank did follow an effective strategy but with

a number of weaknesses. It did many things that were important, in particular, the reform of the ministry, the reform of government parastatals, support for research and extension, and support for participatory approaches. However, there were a number of weaknesses: (i) poverty alleviation objectives (the ends) were stated in strategic documents but at least earlier in the review period appear to have been subsidiary to the drive for privatization (the means); (ii) the question of the balance between supporting development, including rural infrastructure, at the intensive or extensive margin and the associated issues of migration and environmental costs *and* benefits was never adequately explored analytically in sector work nor carried through into lending decisions; (iii) support for extension has been inconsistent with the early Bank-driven push on T&V and then the abrupt abandonment; (iv) land management and soil fertility, at one time strongly supported by Bank agriculture staff as key agriculture concerns for both Tanzania and Africa as a whole, were issues moved up towards the project starting gate and then dropped in favor of a more socially oriented and client demand-oriented approach. Given the comparative advantages of the various donors vis-à-vis the Bank, it is questionable whether this was a sound decision.[54] Finally, an overarching concern about program relevance is that in the CASs there has been limited explicit application of strategy statements and filters to select out and prioritize potential projects. There has been little attempt to offer evidence to reviewers or the Bank's Board on what investment options were considered in CASs, what were rejected and why, and what was finally selected and why. Presenting such information in the alternatives considered section of PADs is too late for a strategic shift. The lack of such analysis in CASs makes the assessment of relevance at this distance more difficult

5.55 **Did the Bank plan and implement the chosen projects well, in other words did it do things right? (Efficacy and Efficiency)** With a series of only nine closed projects it is difficult to say much that would be statistically valid about project performance trends. However, with respect to closed projects there is no strong evidence of a trend in either direction towards better or worse performance over that time frame. The PPARs of three projects in this report lower the ratings from what was found in the ICRs, partly due to concerns about development risk and the links between sustainability and the reform of institutions and processes which have an implicit element of sustainability (i.e. the argument made earlier that a new process can hardly be said to have been established if it cannot be sustained). These three projects were spread over much of the period under review so the findings do not change any conclusion about trend although they do lower the percentage of satisfactory projects. Certainly, project performance has been better than the poor performance of the 1970s and 1980s, but, given the policy environment at that time, it should be. Also, there is some hope in supervision ratings that more recent projects may perform better but it is too early to make such judgments.

5.56 However, there are a number of questions about project design which are discussed below under the question of how well the Bank learned. Of particular concern is the issue of sustainability.

---

54. Few farming households are likely to place soil fertility research, development and training above more visible and definable immediate village investments but it may well be the best national choice for a ten to twenty-year time horizon, and indeed for the sustainability of the more immediate investments,.

5.57 **What were the borrower's priorities over the period of review?** The borrower's priorities largely coincided with the Bank's global sectoral and country strategy. At least in the documentation, the borrower strategy shifted somewhat from a strong earlier focus on food security and, in fact, even self-sufficiency, towards more focus on creating the means to overall productive efficiency. Interestingly, food security was played down in the GOT 2001 strategy although that strategy explicitly refers back to the earlier 1997 policy. Whereas the first statement in the 1997 policy is related to food security, the 2001 document focuses on institutions, private investment climate, agriculture support services, marketing and input supply, and coordination of planning with other sectors. However, in discussions with some senior officials in the ministries, food security, and even self-sufficiency, are still seen as high on the list of priority directions.

5.58 **What was the Bank's role in policy reform?** The Bank has clearly played a leading role in policy reform. The mission explored the attitudes of government officials and concluded that, by and large, the Bank had not imposed its views on the borrower. It brought substantial global experience to the table although, partly as a reaction to the failed policies of the 1970s and early 1980s, the borrower was in any case committed to quite sweeping reforms, albeit with some periods of weaker commitment in the mid -1990s. As might be expected, there was much less commitment within central ministries to decentralization and these doubts go outside agriculture to other sectors also. Some of the concerns, such as whether local-level decisions will give sufficient attention to agriculture competing with more visible items such as schools, roads and clinics, may be valid.

5.59 However, there are several areas where the Bank might have performed better. First, it could have prepared government better for the complexity of reform processes and the need to plan and project the complex intermediate steps. The use of computerized project management planning techniques could have set out the array of steps and forced much greater realism at the outset on both the borrower and the Bank. The stages needed in reaching reform implementation are more widely known than is often implied by ex post claims of uncertainties. Individual steps in a complex reform chain may be uncertain in themselves but government and parliamentary procedures are quite well known and the time to complete a series of steps should be less uncertain than individual component steps. Second, the Bank could have laid out the experience about the small likelihood that resources saved in a sector ministry reform program would find their way back to the same institution. Third, the Bank could have better prepared the borrower to understand the needs of private sector capacity building, a need that, even at that time, had already been seen in other reform programs. As noted earlier, the question was not simply what were the appropriate core activities for a central ministry, it was what were the relative capacities in the government and the private sector and what did this imply for the evolution of the roles of both under the circumstances.

5.60 **To what extent did the Bank interventions impact the sector? (Attribution)** The Bank's interventions impacted the sector positively in both the policy and institutional reform area including, parastatal reform, ministry rationalization, technology development, and some aspects of decentralization. However, as found in the project assessments for the three projects reviewed, this was not without weaknesses. These weaknesses included: failure to look beyond the institutional reforms to focus on impact on beneficiaries; failure to ensure

adequate M&E so that attribution could be understood and, for example, so that pluralism in extension could be evaluated; failure to realistically project reform time scales; and some issues of reform sequencing.

5.61 **Did the Bank ensure country buy-in? Or did it unduly force its particular reform vision?** As noted above, the mission found from discussions with government staff that the Bank had not unduly imposed its views. It had brought to the table wide global experience, albeit with some gaps noted above. There was also some anecdotal evidence that interaction between the Bank and government had improved over the time period. However, in extension, the shift into the T&V system and the abrupt shift out by the Bank, alongside the government's generally less unstable position on T&V, speaks of some degree of Bank pressure on this issue.

5.62 **Did the Bank coordinate effectively with other donors?** The view of donors was that coordination was better now than in the past. There is evidence of various coordination mechanisms that did not exist in the past. The shift towards a basket funding approach, while risky, is certainly evidence of a commitment to coordination. At the individual project level, there are recent examples of wide coordination, such as in the area of marine fisheries where many co-financiers are involved. One of the more difficult areas of coordination has been over procurement procedures.

5.63 **Did the Bank learn sufficiently from earlier program or project lessons?** The lessons from projects have been summarized earlier. All PADs have the required sections showing how lessons have been incorporated. But this review finds some weaknesses here. The recurring issue of sustainability has really never been adequately resolved. It is, of course, one of the central issues for Africa as a whole and quite intractable. However, progress has been very slow. Sustainability problems have been noted for several decades in Tanzania yet, for example, in agricultural research the rationalization of the number and size of research stations has still not really been tackled except at the margins.[55] Moreover, after many decades, sustainability in extension remains the central issue and local government revenue collection now appears likely to decline further. The problem for several decades has been simply that the borrower has not come anywhere near having the resources to sustain either the public research or the public extension service. The T&V system foundered largely on this issue. While solutions are not easy, deeper analysis of options to reach sustainability is needed.[56] At a minimum, sustainability analysis in PADs would seem to call for: (i) an attempt at the tabulation of the trend of pre-project budgetary actuals for operating costs across the relevant set of activities and sources; (ii) the same trend for the project period;

---

55. As a number of commercial companies have shown, it is possible to do adaptive agricultural research without a research station at all.

56. More recently, the lessons taken up for the design of the ASDP seem weak on financial sustainability. The section in the ASDP PAD main report on sustainability (two brief paragraphs) argues in favor of sustainability on essentially two grounds; (i) that government is now more committed; (ii) that the development partnership and pooled resources funding will help; and (iii) that results delivered will feed back to greater sustainability. There is no analysis of the trends of past budgetary allocations, the needs over the project period and thereafter, and the escalating operating cost issues due to losses of taxes and cesses faced by agricultural research and extension, although some of the latter changes occurred a little after the project was approved.

(iii) projection of the operating cost requirements and sources in the post-project period; (iv) discussion of how the above needs could be reconciled with the probable budget.[57]

5.64 Another weakness noted has been that the quality of M&E has been very weak and it is not clear that the Bank program has learned much in this area or that the somewhat limited M&E treatment in the ASDP PAD will trigger a step forward. Finally, there remain some significant gaps in knowledge that have not been filled either through project analysis or ESW, in particular the key question of how much support should be given to intensification versus extensification and the issue of internal migration. Migration is happening, for example from Shinyanga down to Rukwa.[58] In theory, this makes economic sense. The possibility of support for this was mentioned in earlier Bank sector work. But it does not seem to have featured in any interventions and was rejected as an option for PADEP support.

5.65 **What lessons for Bank management do the findings offer?** While a number of the findings have general implications for the way management at various levels could adjust the focus on the agricultural sector, there are a few specific lessons highlighted here. First, as noted by the ICR for the NAEP II project, Bank management needs to listen to operational Task Managers and staff particularly when there is a strong institutionally marketed strategy, such as T&V, being pushed Bank-wide. Second, it is not clear within the projects that poverty targeting is getting enough focus and, given the lack of nationally embedded M&E capacity, and the introduction of basket funding and decentralization, there is some risk that it could even weaken further. Third, as noted earlier, the link between the CAS strategies and the lending program is rarely self-evident and the limited budget for sector work means that the analysis of alternative options that might fit the strategy may not emerge outside the CAS.

6. Lessons Learned

6.1 To summarize the above findings, notwithstanding some lack of analytical rigor in the translation of CAS strategies into actual lending programs, the Bank played a generally positive role in supporting policy and institutional reform related to agriculture. However, there was excessive focus on means rather than ends. Divestiture of parastatals was seen too much as an end in itself rather than as a route to improved service for the rural poor. It is probable that somewhat less of a "Big Bang" approach would have given better results at the farm level and more attention to private sector capacity building. Partly as a result of this approach, there was limited and poor quality impact monitoring through M&E which leaves

57. The PAD of the on-going Marine and Coastal Environment Management Project offers some of what is needed with a quite useful section on the proposed Marine Legacy Fund and, again, qualitative evidence of commitment at various levels of government. However, even here it is not entirely clear what the operating cost needs are nor what might be a realistic expectation of government financial contribution alongside the legacy fund.

58. It should be expected that migration to exploit new unexhausted soils would speed up when fertilizer subsidies are removed and slow down again when they are reinstated (as appears to be happening now). The ratio of financial fertilizer nutrient cost to labor cost has changed greatly over the last three decades (with no apparent changes in fertilizer recommendations).

a legacy of ignorance about effectiveness and efficiency of alternative approaches, particularly in agricultural extension. In the area of technology development and dissemination there were a number of weaknesses. First, partly as a result of decentralization, extension is now in considerable disarray with the majority of staff having grossly inadequate operating funds. Under such debilitating resource constraints, the question of which particular permutations of extension system are best becomes largely irrelevant. Second, while agricultural research is in better shape than extension, the donor rush towards client-oriented adaptive research seeking immediate impact has left insufficient focus on sustaining the essential core of longer-term applied and strategic research. Unless corrected, this will gradually starve the adaptive research program. The Bank can be a balancing influence here. In the area of coordination, the Bank's participatory approach of working with the government and other donors is regarded positively by stakeholders. Sustainability, especially in technology development and dissemination still remains the biggest concern in sector interventions. There has been insufficient attention to addressing the core issue of matching scale of public sector activity to projected resources. The evidence of the last decade would suggest that both the research service and extension service are beyond government's capacity to sustain at current scale. It is very doubtful that privatization and cost recovery in these services will provide sufficient supplementation and at the same time support poverty alleviation sufficiently except in a few localized situations. Finally, the new approach to basket funding, while offering a number of advantages in terms of efficiency of Bank and donor management, appears to be high risk and built on rather limited analysis of government institutional capacity.

6.2 The following are the five main lessons drawn from both the project assessments and the sector overview.

- ***There needs to be an explicit logical link between the strategic and sectoral goals of the Country Assistance Strategy (CAS) and the proposed lending program.*** The obscurity of such links reduces the value of the CAS as both a sighting mechanism and a filter for the structuring of sectoral lending programs. The problem is not that the selected projects are incompatible with the strategy, it is that they are not demonstrably in the upper ranks of compatibility. There is rarely evidence in the CAS of selectivity under decision rules.

- ***Institutional capacity analysis could be strengthened and broadened and chronic problems that persist in a sector over long periods of time should result in more analytical work by the Bank.*** In the ASMP, identifying the "core" activities of public institutions was only half the story. The other half was the identification of the "non-core" activities that the private sector was likely to have the capacity to handle at the time and the reconciliation of these findings. The Bank should focus not only on institutional reform as a means but also on the development ends. In the recent ASDP, public sector capacity to manage basket funding is the big question, yet there is limited analysis of that capacity. In the NAEP II, poor anticipation of the institutional decentralization stages and the associated capacity needs was a design handicap from which the project never fully recovered. Also, there are four areas of weakness over the last 15 to 20 years that show insufficient Bank and borrower analytical response. First, financial sustainability of research and extension, after many projects, remains

largely unresolved. Second, M&E has been chronically weak for many years. It should have been treated long ago as a national M&E capacity problem not a project by project problem. Third, extension itself (for the poor) is no further forward now than it was 20 years ago. The appropriate abandonment of T&V has not been replaced with an efficient alternative public system, even a pluralistic one. Fourth, whether it is optimal in Tanzania to raise Total Factor Productivity by focusing on the intensive margin or the extensive margin, has never been adequately explored even after many decades of debate.

- ***In policy research, there needs to be a balance between shorter-term client-oriented adaptive research and longer-term core applied research and this needs to be embedded in a regional approach.*** Recently, all donors have run to the same side of the ship. Client demand cannot alone determine optimal long-term research strategy, farmers have insufficient information and the associated donor support is too short-term.

- ***The Bank needs to be more realistic in projecting timescales for agricultural reforms.*** In complex sequences of reforms such as parastatal divestiture, the planning and tracking of multiple stages of reforms from initial planning, to consultation, to political interactions, to government processes, to legislation and to cabinet clearances, is always time-consuming and this seems always to come as a surprise. Delay is usually put down to uncertainty or exogenous factors. But, in fact, most of the steps required and the degrees of uncertainty are usually quite well understood by borrower decision-makers. Moreover, the political positions of players are often quite well-known. Realistic projections of the time frame and efficient management of the process could almost certainly be improved by the use of computerized project management techniques as is commonly used for any complex and uncertain processes in industry. There is also policy making software that can help pinpoint critical players and assess their place in the political landscape.

- ***The Bank and the borrowers should be more realistic about the likelihood of funds saved from the down-sizing of a public institution being applied to future operating costs.*** Outside the context of economy-wide civil service reform, such redirection of funding has rarely been observed.

Annex A. Bank Agriculture Projects Between FY1991-2006

In addition to the three projects covered by the PPARs in this report, there are six other closed projects in the agriculture category. There are also five ongoing projects. The following are the main characteristics of these projects and, very briefly, the main issues that arose:

Closed Projects

The *Forest Resource Management Project* FY 92 (US$20.9 m) was designed to support implementation of the Tanzania Topical Forestry Action Plan mainly through strengthening the capacity of institutions and increasing participation of the private sector and local populations. Project outcome was rated satisfactory by the ICR. The project was able to show the benefits of working with local communities and also the benefits of working with local community's simple technologies. The forestry advisory services still needed strengthening (note the parallel with agricultural extension).

The *Financial Sector Management Project* FY 92 (US$211.3 m) The main objectives of this program were to make the macroeconomic framework more favorable to financial sector performance, to improve competition by facilitating the entry of new banks, to strengthen Central Bank supervision capacity, and to restructure individual public banks including the National Bank of Commerce. An OED PPAR rated outcome unsatisfactory. It proved too difficult to support competition while maintaining a national bank as a dominant financial institution. There was a sequencing issue with liberalization coming too early before an ineffective legal and regulatory framework was in place. Also, delayed restructuring of parastatals, some of them in agriculture, hampered efforts to create competition.

The *River Basin Management and Smallholder Irrigation Project* FY 97 (US$26.3 m) This project was intended to strengthen the government's capacity to manage water resources and address environmental concerns and to improve irrigation efficiency in selected irrigation schemes in two basins. The project outcome was rated satisfactory and sustainability likely. The Basin approach was found to be valuable in bringing to the fore basin level issues such as abstractions upstream and starting to resolve water allocation conflicts.

The *Programmatic Structural Adjustment Credit* (PSAC 1) 1 FY 00 (US$190.0 m) The primary objective was to support government's strategy of reducing poverty through structural reforms and private sector development and reducing the cost of doing business. It included the divestiture of key public enterprises and was expected to improve the effectiveness in delivery of public services. It included improvement in the budgeting procedures for agriculture research and extension and supported the divestiture of the remaining cashew nut processing plants and state farms. The project was rated satisfactory by the ICR. There were substantial delays in the reform steps partly because the borrower and Bank had not worked closely enough so that all players fully understood and agreed the steps needed to achieve the objectives. (See the later argument made about the general weakness in detailed planning of steps and phasing.)

The two *Poverty Reduction Support Credits* 1 and 2 (PRSC) FY 03 and FY 05 (US$132.0 and US$150.0 m) These were two of a series of three PRSCs with the first two being subjected to only the simplified ICR. The objective was to support the poverty reduction strategy and particularly to improve private sector development and public sector management. The projects supported the preparation of the Agriculture Sector Development Program. A main focus in agriculture was on the removal of the remaining institutional constraints and improvement of quality and productivity and reduction of marketing costs. IEG considers it too early to draw lessons from this unfinished series. However, IEG expressed some concern in its ICR Review about the suitability of outcome indicators for the final assessment. There was only limited evidence so far on achievement of indicators including some evidence of greater success in school examinations and some on decreased food insecurity.

Ongoing Projects

The Forest Conservation and Management Project (US$31.1 m) was expected to initiate an integrated biodiversity conservation strategy for the Eastern Arc Mountains and strengthen Tanzania's capacity to coordinate forest biodiversity conservation. It supports institutional change and improved service delivery including strengthening the capacity of the Tanzania Forest Service. It is partly funded by GEF. A framework will be developed to involve the private sector in the management of existing plantations. Additionally, the project will finance mapping for inventories of state-owned plantations. Alternative management systems for selected industrial plantations will be piloted, emphasizing M&E. Institutional reforms for biodiversity conservation will be supported, including pilot community-based conservation, and the development of sustainable financing for high forest conservation.

The Lower Kihansi Environmental Management Project (US$6.3 m) aims at ensuring long-term conservation of the Kihansi Gorge ecosystem. At the national level, the project supports the development of a legal and institutional framework for environmental, and water resources management. There are four components: habitat and species conservation, and management; establishment of final water rights; implementation of an updated environmental management plan; and, institutional strengthening. A major risk is the increased power demands in Tanzania, which may limit the Tanzania Electric Supply Company's ability to provide sufficient bypass water flows to conserve the gorge ecosystem.

The Participatory Agricultural Development and Empowerment Project (US$56.6 m) seeks to raise the production of food, incomes, and assets in about 840 villages in a sustainable manner through the implementation of small agricultural development subprojects planned and managed by community members. The objective will be achieved by: (i) empowering self-selected rural communities and farmer groups to select sustainable and profitable technologies; (ii) sharing of costs by the public sector and participants and thus sharing risks; (iii) enhancing demand for products and services provided by the private sector in rural areas by encouraging savings; (iv) promoting improved land and crop husbandry practices; (v) supporting the ongoing decentralization process; and (vi) partially financing maintenance and/or construction of roads, bridges, and other subprojects to improve access to markets.

The Tanzania Marine and Coastal Environment Management Project (US$51.0 m) aims to strengthen the sustainable management and use of the borrower's Exclusive Economic Zone and coastal resources resulting in enhanced revenue, reduced threats to the environment, better livelihoods for coastal communities and improved institutional arrangements. The project consists of the following components: (i) support for a common governance regime for the Exclusive Economic Zone (EEZ); (ii) support for a comprehensive system of managed marine areas building on Integrated Coastal Management (ICM) strategies that empower communities; (iii) support to coastal communities for sub-projects that contribute to improved livelihoods and sustainable ecosystem management; and, (iv) provision of efficient project implementation services. There is a GEF component.

The Agricultural Sector Development Project (US$90.0 m) is a large basket funding project with support from a number of donors. Some aspects were discussed earlier. The two objectives are: (a) to enable farmers to have better access to agricultural knowledge, technologies, marketing systems and infrastructure as a means to higher productivity, profitability, and farm incomes; and (b) to promote agricultural private investment based on an improved regulatory and policy environment. There are two components: (i) Local Level Support to improve agricultural service delivery; the quality of agricultural investments; and the local policy and regulatory environment for private investment in agriculture; and (ii) National Level Support to improve the responsiveness and quality of agricultural research and policy, to carry out preparatory work and investment in national level irrigation through public-private partnerships, to improve food security and sector coordination, and to stimulate agricultural markets and private sector development.

Table 6 gives the ICR Review ratings of closed projects. Briefly, these indicate a generally above average level of performance except for the Financial Sector Project. However, with the findings of the PPARs in this report, the ratings for three projects in the table change. In two of those projects there is particular concern about Risk to Development Outcome, a rating that replaced the Sustainability rating quoted in the table.

Table 7 shows the current ratings for the five on-going agriculture projects. The last, the large basket funding sector project, has only recently become effective. Obviously, with such a small sample a trend assessment would not be valid. Briefly, the following are the main characteristics of each project.

Table 6. ICR Review Ratings in Agriculture and Agriculture-Related Projects Approved 1990 to 2005

Approval FY	Project ID	Project	Total Evaluated (No)	Outcome % Sat (No)	Inst Dev Impact % Substantial (No)	Sustain-ability % Likely (No)	Overall Bank Performance % Sat (No)	Overall Borrower Performance % Sat (No)
1992	P002785	FOREST RESOURCES MAN	1	100.0	100.0	100.0	100.0	100.0
	P002809	FIN SECTOR	1	0.0	0.0	0.0	0.0	0.0
1994	P002801	ASMP	1	100.0	100.0	100.0	100.0	100.0
1997	P002753	TZ-Nat Ext Phase 2 (FY97)	1	100.0	100.0	100.0	0.0	0.0
	P038570	TZ-Riv Basin Mgmt & Smll Hldr Irr (FY97)	1	100.0	100.0	100.0	100.0	100.0
1998	P002804	TZ-Agricultural Research (FY98)	1	100.0	100.0	100.0	100.0	100.0
2000	P002822	TANZANIA PSAC I	1	100.0	100.0	100.0	100.0	100.0
2003	P074072	TZ PRSC1	1	100.0	100.0	100.0	100.0	100.0
2005	P074073	TZ-PRSC2	1	100.0	100.0	100.0	100.0	100.0
Result			**9**	**88.9**	**88.9**	**88.9**	**77.8**	**77.8**

Table 7. Latest Supervision Ratings (end 2006) for On-going Projects

Approval FY	**Project**	**Dev. Objective Rating**	**Implementation Rating**
2002	Forest Conservation and Management	MU	MU
2002	Lower Kihansi Env. Management	S	S
2003	Participatory Agr. Dev. & Empowerment	MS	MS
2006	Marine and Coastal Env. Man. +GEF	S	S
2006	Ag. Sector Development	HS	S
Source: World Bank Business Warehouse			

Annex B. Basic Data Sheet

AGRICULTURAL SECTOR MANAGEMENT PROJECT (ASMP)

Key Project Data *(amounts in US$ million)*

	Appraisal estimate	*Actual or current estimate*	*Actual as % of appraisal estimate*
Total project costs	27.20	21.00	77
Loan amount	24.50	21.00	86
Cofinancing			
Cancellation			

Note: Cost data in the ICR is not clear.

Project Dates

	Original	*Actual*
Initiating memorandum		09/15/1992
Negotiations		
Board approval		07/20/1993
Signing		
Effectiveness	10/01/1993	01/10/1994
Closing date	06/30/1999	06/30/2001

Staff Inputs (staff weeks)

	Staff weeks	*US$ ('000)*
Preappraisal	22.6	68.6
Appraisal/ Negotiations	40.5	121.6
Supervision*	249.0	1025.6
Other	8.0	40.0
Total	319.1	1255.8

*Includes a large FAO/CP fund used in the reconciliation of production statistics.

Mission Data

	Date (month/year)	*No. of persons*	*Specializations represented*	*Performance rating Rating Trend*	
				Implementation Progress	*Development Objectives*
Identification/ Preparation	11/1992	4	A, E, F, I		
Appraisal	03/1993	7	A, E, E, T, F, I, PR		
Supervision 1	10/93	3	F, PR, IN	S	HS
Supervision 2	03/94	3	E, E, I	S	HS
Supervision 3	07/94 UD	2	E, O	S	S
Supervision 4	11-12/94	5	E, F, EX, V, S	S	HS
Supervision 5	04/95	5	E, EX, F, I, P	S	S
Supervision 6	02-03/96	5	E, E, EX, I, S	S	S
Supervision 7	10/96	7	E, EX, F, I, PR, O, S	S	S
Supervision 8	10/96	5	E, E, EX, F, O,	S	S
Supervision 9	06/97 UD	2	E, O	S	S
Supervision 10	07/97	4	E, O, F, P	S	S
Supervision 11	03/98	6	E, EX, F, F, PS	S	S
Supervision 12	11/98	5	E, EX, F, I, P	S	S
Supervision 13	03/99	3	E, EX, P	S	S
Supervision 14	06/99 UD	2	E, O	S	S
Supervision 15	11/99	5	E, EX, F, O, P	S	S
Supervision 16	06/00 UD	2	E, O	S	S
Supervision 17	12/00 UD	2	E, O	S	S
Supervision 18	03/01	4	E, F, T, O	S	S
Completion					

A = Agriculturist; E = Economist; EX = Extension Specialist; F = Financial Analyst; I = Institutions Specialist; IN = Agricultural Information Specialist; P = Privatisation Specialist; T = Training Specialist; O = Operations Officer; PR = Procurement Specialist; S = Statistician; V = Veterinarian; UD = PSR Update

SECOND AGRICULTURAL RESEARCH PROJECT (TARP II)

Key Project Data (amounts in US$ million)

	Appraisal estimate	*Actual or current estimate*	*Actual as % of appraisal estimate*
Total project costs	22.98	22.83	99
Loan amount	21.75	21.40	98
Cofinancing			
Cancellation			

Project Dates

	Original	*Actual*
Initiating memorandum		10/30/1996
Negotiations		
Board approval		01/29/1998
Signing		
Effectiveness	03/31/1998	06/11/1998
Closing date	06/30/2003	06/30/2004

Staff Inputs (staff weeks)

	Staff weeks	*US$ ('000)*
Preappraisal	45.6	183.1
Appraisal/Negotiations	17.1	46.0
Supervision	119.3	492.1
Other	10.7	21.4
Total	192.7	742.5

Mission Data

	Date (month/year)	*No. of persons*	*Specializations represented*	*Performance rating Rating trend*	
				Implementation Progress	*Development Objectives*
Identification/ Preparation	01/1997	5	TEAM LEADER (1); PROCUREMENT (1); FIN. (1); PROG. ASST. (1); AGRIC. MGT AND TRAINING (1)		
Appraisal	08/1997	7	TEAM LEADER (1); RESEARCH/TECH. (1); ECON. ANALY. (2); PROJECT COST (1); PROCUR. (1); FINANCIAL MGT. (1)		
Supervision	11/1999				
	11/1999				
	11/1999	5	TEAM LEADER (1); PROC. SPECIALIST (1); RURAL DEV.SPEC. (1); FINANCIAL MGT. SPEC. (1); AGRICULTURIST (1)	S	S
	05/2001	7	TTL (1); RURAL DEV.SPECIALIST (1)NRM SPEC. (1); SENIOR AGRIC (1); FINANCIAL SPECIALIST (1); FINANCIAL ANALYIST (1); PROCUREMENT SPEC. (1)	S	S
	10/2001	5	TEAM LEADER (1); RURAL AGRIC. SPEC. (1); SR. AGRIC. (1); SR.FINANCIAL ANALY. (1); PROCUREMENT SPEC. (1)	S	S
	05/2002	5	SR. AGRONOMIST (1); RURAL AGRIC. SPEC. (1); SR.AGRIC. (1) PROCUREMENT ANALYST (1); SR, FINANCIAL ANALYST	S	S

	Date (month/year)	*No. of persons*	*Specializations represented*	*Performance rating Rating trend*	
				Implementation Progress	*Development Objectives*
			(1)		
	12/2002	7	TEAM LEADER (1); SR FIN.ANALYST (1); PROC.ANALYST (1); M&E (1); FIN. MGT.SPEC. (1); NRM SPEC (1); SR.AGRIC. (1)	S	S
	06/2003	7	TEAM LEADER (1); RURAL DEVELOPMENT SPEC (1); SR FIN.ANALYST (1); SR.PROC.SPEC (1); M&E (1); FIN. MGT. SPEC. (1); NRM SPEC (1); SR. AGRIC.	S	S
	02/2004	6	TEAM LEADER (1); RURAL DEVELOPMENT SPEC (1); SR. FIN. ANALYST (1); SR. PROC. SPEC. (1); M&E (1); FIN. MGT. SPEC. (1) ; SR. AGRIC.	S	S
	06/2004	5	RURAL DEV. SPECIALIST (1); PROCUREMENT ANALYST (1); FINANCIAL MNGT. SPEC. (1); M&E SPEC. (1) ; ANALYST (1) ; SR. AGRICULTURIST (CON) (1)	S	S
Completion	10/2004	3	RURAL DEV. SPEC. (1); OPERATIONS OFFICER (2)	S	S

NATIONAL AGRICULTURAL EXTENSION PROJECT II (NAEP II)

KEY PROJECT DATA (AMOUNTS IN US$ MILLION)

	Appraisal estimate	*Actual or current estimate*	*Actual as % of appraisal estimate*
Total project costs	32.95	30.60	93
Loan amount	31.10	28.24	91
Cofinancing			
Cancellation			

PROJECT DATES

	Original	*Actual*
Initiating memorandum		09/14/1995
Negotiations		
Board approval		07/11/1996
Signing		
Effectiveness	10/08/1996	10/08/1996
Closing date	12/31/2001	12/31/2003

STAFF INPUTS (STAFF WEEKS)

	Staff weeks	*US$ ('000)*
Preappraisal	56.4	167.4
Appraisal		
Negotiations		
Supervision	142.5	610.3
Other		
Total	198.9	777.7

Note: The ICR data is incomplete.

MISSION DATA

	Date (month/year)	*No. of persons*	*Specializations represented*	*Performance rating*	
				Implementation Progress	*Development Objective*
Identification/ Preparation	Sept./Oct. - 1995	8	Agriculture Services		
Supervision	12/06/1996	6	TTL(1), RESEARCH (4)	S	S
	07/11/1997	2	TTL (1); AG. SERVICES (1)	S	S
	03/13/1998	1	TTL (1)	S	S
	12/03/1998	5	TTL (1); FIN. MGMT. (1); ASSISTANT (1); EXTENSION (1); SOIL FERTILITY (1)	U	S
	06/14/1999	4	TTL (1); ECONOMIST (3)	U	U
	12/21/19999-MTR	8	TTL (1); AG. RESEARCH AND SERVICES (3); ECON (1); INSTI (1); FINANCE (1); COMMU. (1)	U	U
	07/14/2000	1	TTL (1)	U	U
	11/21/2000	`1	TTL (1)	S	S
	07/20/2001	4	TTL (1); AG./ECONOMIST (2); PROC. SPECIALIST (1)	S	S
	03/29/2002	4	TTL (1); AGRICULTURIST (1); RURAL DEV. (1); PROC. (1)	U	S
	10/01/2002	4	TTL (1); OPERATIONS (1); AGROCI;/ (1); RURAL DEV. (1)	S	S
	06/01/2003	5	TTL (1); AGRICULTURIST (1); RURAL DEVELOPMENT (1); M&E (1); PROCURE. (1)	S	S
	12/04/2003	2	TTL (1); TEAM MEMBER (1)	S	S
Completion	April/May	1	Agriculturist	S	S

Annex C. Borrower Comments

Borrower comments on Second Agricultural Research Project (Credit 3036) IEG Report, prepared by Dr. J.M. Haki, Director of Research Department

We wish to acknowledge receipt of the report by your group on the above project. I have gone through it quite thoroughly and have just a few comments to make on your findings. First let me start by commending the team for managing to come out with very valuable observations in a very short time. Generally I am in agreement with most of your observations on the performance of the Project and particularly on the fact that with the existing weak extension service in the country it would not have been possible for the benefits of the research project to reach a wider number of resource-poor farmers and that research resources were in most cases stretched to perform the extension function. However I somehow fail to understand why you say there has been little focus on legumes in the project considering their role as fertilizers and on human nutrition. For the record, more than 5 varieties of beans, 4 of pigeon peas, 3 cowpea and one soybean varieties were released and disseminated across the country.

I also concur with the observation that the apparent Institutional strengthening that occurred during implementation would have needed sustainable funding after project completion to sustain the positive linkages with all partners. This is now being addressed. Furthermore, the negative impact of the Bank procurement and disbursement procedures during implementation played a significant role in the inadequate performance of the project, as you correctly noted.

The issue of crop cess abolition, is of grave concern to all of us. However, as may know, this decision was forced on the Government by the DPs, specifically the Bank and the EU as a conditionality for GBS access. We are all very much aware of the positive impact this cess contribution was having on the cash crop research and development which has now been negatively impacted. Incidentally it was the same Bank which aggressively advocated for the establishment of private stakeholder owned and managed research institutes. These same institutes are now competing for the same resources from the Ministry's ceiling with the other food crop commodities.!!!

We look forward to receiving your final report.

Borrower Comments on NAEP II Project Performance Assessment Report prepared by Dr. N.P. Sicilima, Director of Crop Development, Ministry of Agriculture Food Security and Cooperatives TANZANIA

I think the consultants did a good job as per terms of reference.

However, as a general comment they evaluated the project against the indicators that were not planned for. That is the project was not well designed to deliver the main project benefits. The project sustainability was not inbuilt in the project methodology and approach. For it is well known that in Africa most project that are based on Participatory Approaches have been found to be sustainable and significantly help project participants meet their objectives (Refer to: Sicilima, Nicodemus P., (1996). ***Factors Associated with Farmers' Participation in Agricultural Extension Programs in Tanzania.*** Ph.D. dissertation, The University of Wisconsin – Madison. U.S.A.)

For those areas that were well designed the project did deliver very well. Unfortunately, the assessment doesn't clearly show that. For example the project did very well in capacity building with regard to training. More than 75% of extensionists were training through funding by NALERP and NAEP II (diploma level, BSc

and MSc). After NAEP II, training for extension workers has been a nightmare. Additionally, more than 80% of the vehicles used by extension workers particularly at district and regional level were purchased through NAEP II funding. NAEP II also had a strong component for training farmer/farmers groups through field visits, residential training, field days and study tours.

On the other hand, the project did very poorly on empowering farmers analyse their problems, design and implement interventions to improve their situation. That is happening under PADEP with significant impact on increasing productivity, production and family incomes.

At farm level one can observe NAEP II impact as now many farmers are aware of the basic crop husbandry practices. Many farmers have adopted recommendations that do not require any cash outlay or external inputs eg. planting in lines.

SPECIFIC AREAS

- On page ix and x morale is low and extension is in poor state because while NALERP and NAEP II greatly financed the activities of extension staff at district and field level, currently support is minimal and if any is mostly in terms of salaries.

- On page 27 Objectives: the project was not designed to delivery the intended benefits eg. Increasing productivity and incomes. PADEP is designed to do that.

References

Anderson, J., Feder, G., and Ganguly, S. *The Rise and Fall of Training and Visit Extension: An Asian Mini-drama with an African Epilogue*. Agriculture and Rural Development Department. World Bank. (undated)

Baffes, J., *Reform Experience with the Tanzanian Cotton Sector*. World Bank ESSD Findings note no. 251, June 2005.

Baffes, J., *Tanzania's Coffee Sector: Constraints and Challenges in a Global Environment*. June 2003

Bigsten, A., Mutalemwa, D., Tsikata, Y., and Wangwe, S. *Tanzania* (A paper on Aid to Tanzania) Economic and Social Research Foundation, Dar es Salaam and Goteborg University. 2000

Danielson, A., *Growth without Poverty Reduction?* Dept. of Economics University of Lund, October 2004.

Dejene, A., Shishara, E., Yanda, P., and Johnsen, F. *Land Degradation in Tanzania*. World Bank Technical Paper No. 370.

Ministry of Agriculture, Tanzania, *NAEP II Final Beneficiary Assessment*, September 2003 (TA by Agrisystems (EA) Ltd)

Ministry of Agriculture, Tanzania, *TARP II Survey Report of Farmers Participating in On-Farm Research,* May 2004

National Accounts of Tanzania Mainland 1992 to 2004. National Bureau of Statistics. January 2006

National Sample Census of Agriculture (3 Volumes). National Bureau of Statistics and other ministries. 2002/2003

Rutatora, D., and Mattee, A. *Major Agricultural Extension Providers in Tanzania*. African Study Monographs. December 2001

Special Program for African Agricultural Research (SPAAR) *Lessons Learnt from Implementation of Frameworks for Action (FFA)*. Consultants Report SPAAR March 1995

Tanzania, Diagnostic Trade Integration Study. Prepared under the Integrated Framework for Trade-Related Technical Assistance to Least Developed Countries program. November 2005

Tanzania. *Soil Fertility Initiative Concept Paper*. Ministry of Agriculture, Sokoine University of Agriculture, FAO. October 2000

TARP II SUA Project. *Adoption of Technologies for Sustainable Livelihoods*. August 2005. TARP II/SUA

Van Arkadie, and Dinh, *Economic Reform in Tanzania and Vietnam: a Comparative Commentary*. Working Paper No. 14, April 2004. Economic and Social Research Foundation

World Bank Africa Region Working paper No. 70 on Cashew Production.

World Bank Country Study, 2000. *Agriculture in Tanzania Since 1986*. World Bank, GOT, and IFPRI, Washington DC

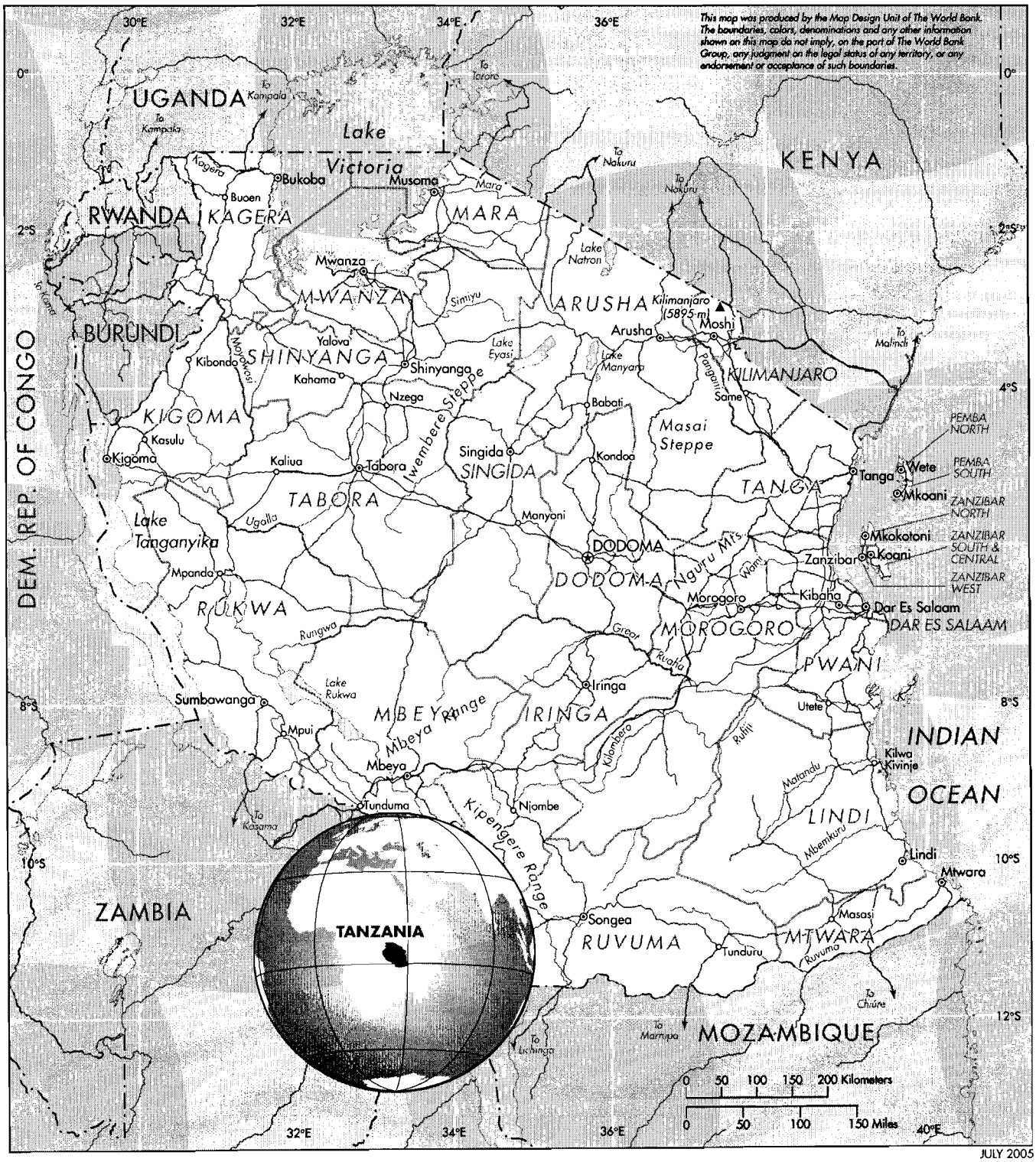
World Bank 1997. *Land Degradation in Tanzania*. World Bank Technical Paper No. 370, 1997

World Bank Africa Region Working Paper no. 69 on the Tea Sub-sector.

Note: This reference list does not include all the World Bank CASs, PADs, ICRs, and PPARs referred to for the lending programs and agriculture projects.

TANZANIA

- SELECTED CITIES AND TOWNS
- PROVINCE CAPITALS
- NATIONAL CAPITAL
- RIVERS
- MAIN ROADS
- RAILROADS
- PROVINCE BOUNDARIES
- INTERNATIONAL BOUNDARIES



JULY 2005