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PERFORMANCE ASSESSMENT REPORT

MALAWI

FISHERIES DEVELOPMENT PROJECT

CREDIT No. 2225-MAI

March 28, 2002

Sector and Thematic Evaluation Group
Operations Evaluation Department

Currency Equivalents (annual averages)

Currency Unit = Malawi Kwacha (MWK)

Appraisal (1993)	US$1 = MWK 2.8
At Completion (2000)	US$1 = MWK 55.0

Abbreviations and Acronyms

ADMARC	Agricultural Development and Marketing Corporation
CIDA	Canadian International Development Agency
DANIDA	Danish International Development Agency
DFID	Department for International Development (UK)
EEC	European Economic Commission
ES	Evaluation Summary
FAO	Food and Agricultural Organization
FD	Fisheries Department
GEF	Global Environment Facility
GOM	Government of Malawi
GTZ	Deutsche Gesellschaft für Technischez Zusammenarbeit
ICEIDA	Icelandic Development Agency
ICR	Implementation Completion Report
IDA	International Development Association
MELDECO	Malawi Development Corporation
MRFC	Malawi Rural Finance Corporation
NDF	Nordic Development Fund
ODA	Overseas Development Administration (U.K.)
OED	Operations Evaluation Department
PCU	Project Coordination Unit
PPAR	Project Performance Assessment Report
SACA	Smallholder Agriculture Credit Administration
SADC	Southern African Development Community
UNDP	United National Development Program
WRO	Women's Program Officer

Fiscal Year

Government: April 1–March 31

Director-General, Operations Evaluation	:	Mr. Robert Picciotto
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The World Bank
Washington, D.C. 20433
U.S.A.

Office of the Director-General
Operations Evaluation

March 28, 2002

MEMORANDUM TO THE EXECUTIVE DIRECTORS AND THE PRESIDENT

SUBJECT: Performance Assessment Report on Malawi Fisheries Development Project (Credit 2225-MAI)

The Malawi Fisheries Development Project, supported by a credit of US$8.8 million, was approved in 1991. Cofinancing of US$4.5 million was provided by the Nordic Development Fund (NDF) and the Icelandic Development Agency (ICEIDA). By completion, cofinancing had increased to US$4.94 million, NDF disbursing US$2.81 million and ICEIDA US$2.13 million. After a one-year extension, total costs amounted to US$7.9 million and the undisbursed credit of US$0.9 million was canceled at project closure in June 1999.

The overall objective was to realize the potential of the fisheries subsector to the economy as a whole. In particular, improved fish production would increase nutrition and food supply, and generate off-farm employment to reduce rural poverty, particularly among women. This was to be achieved by strengthening the capacity of the Fisheries Department (FD) with a focus on regulatory instruments and functions, staff training, and technical assistance while simultaneously assisting the FD to divest itself of all commercial enterprises (boat building, ice plants, commercial fishing, sale of gear, and spares). In addition, fish production was to be improved through support for traditional/artisanal fishermen, semi-commercial and commercial activities, establishment of a pilot program to increase women's involvement in fish marketing, and rehabilitation of access roads, fishing jetties, and shore-based facilities. To aid environmental sustainability, a component was directed at research and fish stock assessment, and pilot lake conservation and aquaculture subprojects. Icelandic funds provided for a research vessel and the technical assistance of two research biologists. Nordic funds provided half the costs for a new trawler for the private sector Malawi Development Company (MALDECO), various related infrastructure, and training of fisheries personnel.

Lower than expected institutional capability within the FD and environmental concerns led to informal restructuring of the project. Fears of over-fishing led to an 80 percent reduction in the fish production target in 1994 and funds allocated to this were transferred to civil works, but the commercial fishing target of 1,500 tones was retained. There was thus an increased focus on improving the institutional and managerial capacity of the FD, research, and commercial fishing. And in 1995, the Bank approved the GEF/SADC Lake Malawi/Nyasa Biodiversity Conservation Project to be executed by the FD. With this additional task, FD's capacity was further strained, and at mid-term review in 1996 the credit program, rural access roads, and aquaculture initiatives were dropped. While country-ownership was weak, this was not helped by poor Bank supervision and five changes of task managers. It was only after mid-term review that things started to improve.

Rated against the original objectives the outcome is unsatisfactory. The main objective, realizing the economic potential of the fisheries sector was not met although sectoral institutional capacity was improved primarily through training and decentralization. Overall nutritional, employment, and rural poverty alleviation objectives remained unachieved. Research eventually proved substantial and unexploited deep-water fish stocks. However, access to these stocks was jeopardized by failure of the boat-building component and ineffective credit support for fisheries and gears that was to enable fishermen to move offshore. Consequently, only 900 of the 7,500 tons projected at appraisal was achieved — all of this from the small commercial sector — while traditional fishing catches declined. The net impact is probably negative. And continued inshore concentration has increased pressure on its rich biodiversity and undermined conservation efforts of the parallel GEF project.

Appraisal correctly diagnosed the Fisheries Department as weak, yet overloaded it with a complex array of activities, many of which it was ill-equipped to implement. For example, FD's management, building, and equipment of its new headquarters eventually cost three times the budget and accounted for half of project costs. The Fisheries Training College at Mpwepwe was expanded and its curriculum was updated and revised. But the college's capacity far exceeds national requirements and its operating cost is high. FD effectiveness in the field is hindered by erratic and declining operational budgets. A progressive 1997 Fisheries Conservation and Management Act allows for co-management of artisanal fisheries and FD extension activities formed 267 beach village communities to manage and regulate fisheries in their localities — but only 34 communities have been trained. Fisheries staff facilitated formation of 259 credit groups covering about 4,000 people, but the credit program failed (in part due to independent restructuring of the credit sector) and new credit institutions were risk-averse: short-term lending discriminated against investment in capture fisheries, fish processing, and marketing. Indeed, most credit went into trade of consumer goods not related to fishing. Low demand, allied with high interest rates and the Bank's desire to focus FD's activities, led to the cancellation in 1996 of a women's program to support fish processing activities.

Divestiture of commercial activities proved counter-productive because, with higher profitability alternatives available to the private sector, they were unattractive and fell into disuse. The fisheries sector — particularly the traditional/artisanal and semi-commercial fisheries — is less well-served now than before the project. Main causes were the Bank's doctrinaire approach to privatization and overestimate of local commercial incentives and interest after years of dictatorial control. And there are unforeseen consequences. The lack of private take-up after divestiture, and a shortage of ice plants, have caused local communities to resort to fish preservation using smoke, further depleting dwindling forest resources. Contrarily, private sector commercial fishing (MALDECO) was revitalized by Bank investment and now returns a pre-tax profit. Yet the Bank's help to private sector commercial fishing is seen by many as unresponsive to Malawi's prevailing rural poverty, particularly as poor fishermen are worse off now than before the project.

The OED assessment rates the outcome of this operation as unsatisfactory, institutional development as modest, and sustainability as unlikely. Similarly, Bank and borrower performance is rated as unsatisfactory. Independent evaluation of Nordic and Icelandic cofinancing rated their contribution as satisfactory, a rating endorsed by OED. There are five major findings:

- Failure to undertake realistic appraisal of institutional capability risks overloading projects with unachievable objectives and components.
- Hasty reaction to unsubstantiated threats to the sustainability of natural resources may have perverse consequences. In this case, fear of over-fishing led to cancellation of measures to promote deep-water fishing. This increased pressure on fragile inshore fisheries, threatened biodiversity conservation efforts, and hindered poverty eradication.
- Divestiture of public sector commercial activities should be preceded by a thorough institutional analysis to determine if sufficient incentives and capacity exist within the private sector, particularly when earlier political regimes did not encourage independent private sector initiatives.
- The Bank should ensure that parallel projects with overlapping objectives in the same sector are adequately coordinated to maximize development impact.
- Partnership with bilateral development agencies (who had a comparative advantage in many areas) was successful because of a clear definition of roles and careful structuring of procurement responsibility.

Attachment

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

About this Report

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

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

Each PPAR is subject to a peer review process and OED management approval. Once cleared internally, the PPAR is reviewed by the responsible Bank department and amended as necessary. The completed PPAR is then sent to the borrower for review; the borrowers' comments are incorporated into the document that is sent to the Bank's Board. When an assessment report is released to the Board, it is also widely distributed within the Bank and to concerned authorities in member countries.

About the OED Rating System

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

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

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

Efficiency: The extent to which the project achieved, or is expected to achieve, a return higher than the opportunity cost of capital and benefits at least cost compared to alternatives. *Possible ratings:* High, Substantial, Modest, Negligible.

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

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

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

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

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

Contents

This report was prepared by Mr. George Keith Pitman (Task Manager) who evaluated the project in February 2001. Mr. William Hurlbut edited the report. Ms. Soon-Won Pak provided administrative support.

Principal Ratings

	*ICR**	*ES**	*PAR*
Outcome	Unsatisfactory	Unsatisfactory	Unsatisfactory
Sustainability	Unlikely	Unlikely	Unlikely
Institutional Development	Modest	Modest	Modest
Borrower Performance	Unsatisfactory	Unsatisfactory	Unsatisfactory
Bank 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 OED product that seeks to independently verify the findings of the ICR.

Key Staff Responsible

	Task Manager	*Division Chief*	*Country Director*
Appraisal (Feb 1991)	N. Okidegbe	Ridwan Ali	S. Denning
Midterm (Jan 199)	Dan Fullerton	Sushma Ganguly	Barbara Kafka
Completion (June 2000)	Satish Kumar	Sushma Ganguly	Darius Mans

Preface

The Malawi Fisheries Development Project, supported by an International Development Association (IDA) credit of US$8.8 million, was approved in 1991. Cofinancing of US$4.5 million was provided by the Nordic Development Fund (NDF) and the Icelandic Development Agency (ICEIDA). By completion, cofinancing had increased to US$4.94 million, NDF disbursing US$2.81 million and ICEIDA US$2.13 million. After a one-year extension, total costs amounted to US$7.9 million and the undisbursed credit of US$0.9 million was canceled at project closure in June 1999.

The PAR presents the findings of a mission by the Operations Evaluation Department (OED) that visited Malawi in February 2001. The findings are based on project documents and files, field visits to the project, and discussion with officials of the Malawian government, respective government departments, officials and staff concerned with fisheries and environment, donors working in the fisheries sector as well as meetings with project beneficiaries, fisherfolk, and beach village communities. The author would especially like to acknowledge the courtesy and helpfulness of the Fisheries Department and its staff at Senga Bay and the Bank's last task manager.

The Malawi Fisheries Development Project was assessed for two reasons:

- The design and organization of the project gave rise to considerable implementation problems and it was expected that a number of lessons would emerge from a performance assessment.

- A cluster audit with the GEF/SADC Lake Malawi/Nyasa Biodiversity Project (GEF TF 28671) that also focused on Lake Malawi would allow a sector overview. There is considerable complementarity between these projects: the Fisheries Development Project was completed at the same time and its objective of mitigating unsustainable levels of in-shore fishing complements the objectives of the Biodiversity Project. Yet, the Africa Region's staff rated the Fisheries Development Project as unsatisfactory on most elements — in contrast to the Biodiversity Project. The reasons for these differing outcomes need examination.

Following standard OED procedures, the draft PAR was sent to the borrower and development partners for comments before being finalized. No comments were received.

1. Background

1.1 Malawi is land-locked and resource-poor with a narrow economic base highly susceptible to external shocks. Agriculture is the backbone of the economy accounting for 35 percent of GDP, 90 percent of exports, and 85 percent of employment generation. Fisheries, an important agricultural subsector, makes a significant contribution to the country's food security and provides about 4 percent of GDP. It supplies about 75 percent of the nation's dietary animal protein, provides employment for about 30,000 traditional and 2,000 commercial/semi-commercial fishermen, and supports fisheries-related livelihoods for about 200,000 people.[1]

1.2 The government's primary objectives for the fisheries subsector given in its Statement of Development Policy (1987-96) was to maximize economically exploitable and sustainable fish production without environmental degradation. Secondary objectives were improving the efficiency of fishing, processing, and marketing; creating additional off-farm employment; promoting investment in viable rural fish-farming units to increase nutrition and protein intake in rural areas; and harnessing aquatic resources for fish-farming while protecting endemic fish fauna. Before the Bank's entry into this subsector, five development partners (FAO, UNDP, GTZ, ODA, and EEC) had helped the government initiate research in marketing; develop regulation, monitoring, and evaluation; develop the institutional capacity of the Fisheries Department; and commercialize capture and culture fish production.

1.3 As a result of these efforts, national fish production increased from 51,000 tons to 80,000 tons or about half of the national potential in the period 1980–90, and it was estimated that slightly more than a third of Lake Malawi's production potential of 86,000 tons was used. As fish prices were lower than those for meat, poultry, and pulses there was high demand — about 90 percent of which is met by the traditional/artisanal sector using dugout canoes or small plank boats. The low response of the semi-commercial sector was because of poor management, decrepit supporting infrastructure, and the need for replacement and rehabilitation of the small paired-trawler fleet. The only commercial fishing company, MALDECO, recently privatized and formerly part of President-for-Life Hastings Banda's Press Corporation, was run down and required substantial reinvestment.[2] As a result, production did not keep pace with high population growth and the imbalance contributed to a deterioration in nutritional standards, particularly among rural children. This challenge, allied with the characteristics of the lake fishery — fish landing points scattered along the Lake Malawi's shore enabling easy transport to rural people to improve their nutrition and generate off-farm employment — made efforts to increase fisheries production an attractive proposition for the Bank.

1.4 At appraisal, the Bank's agricultural strategy for Malawi was aimed at fostering economic growth, food security, poverty reduction, and protecting the natural resource base, and

1. Activities include: fish processing, marketing, ice works, boat building and repair, engine repair, and fishing gear supply.

2. The World Bank. OED 2000. Country Assistance Evaluation. "According to the Malawi Chamber of Commerce, three firms control up to 80% of the corporate sector in 'asset ownership, market shares, and revenue.' Two of these (ADMARK and MALDECO) are public corporations and the third, Press Corporation (owned by President Banda), is managed by a trust comprising Press and government appointees. Press dominates a range of local markets…while ADMARC's dominant position in urban and town retail maize sales helps crowd out small private traders. There are reports of active efforts by large firms to discourage new entrants and an effective anti-monopoly regime to discourage unfair practices is absent."

it firmly believed that it had a comparative advantage over other donor-assisted efforts.[3] The Bank argued that "under the proposed project, IDA would assist government in marshalling international support to address Malawi's broader environmental concerns and complement government efforts designed to establish an effective fisheries resource management program, including monitoring control and surveillance systems... IDA initiatives would also assist the Bank in coordination of ongoing programs and those likely to be funded by other donors."

1.5 Management review raised concern that the major constraint facing the project was the institutional weakness of the Fisheries Department, particularly in financial management. Accordingly, government agreed, as a condition of Board presentation, to develop an action plan for reorganizing the FD, a manpower development plan, and research program, and to recruit an expatriate financial and management expert to assist the FD management. Reviewers also felt that $7.3 million (47 percent of total costs) for FD institutional development — with almost a third for new buildings — was high, particularly as it appeared to contradict the Country Economic Memoranda and the message the Bank had been pushing with other donors that most of the budget should be for the social sectors and that infrastructure investment should be reduced and shifted to rehabilitation and recurrent spending. There was also concern at government's ability to service recurrent costs. Staff responded that without new infrastructure, FD effectiveness would be reduced; and that recurrent cost forecasts were within the limits agreed during the Public Expenditure Review. Despite the small size of the US$0.9 million credit targeted at fishermen and women fish traders, there was concern that it would distort the financial system. It was agreed that the Smallholder Agricultural Credit Corporation would charge market-determined interest rates. Subsequently, and in addition, the government obtained a "no objection" from the other riparians of Lake Malawi/Nyasa to satisfy the Bank's safeguard policy requirements under OP 7.5 International Waterways. After Board approval (April 1991), government took five months to meet the conditions of effectiveness, namely providing a restructuring plan for the Mpwepwe boatyard.

OBJECTIVES

1.6 The project's objective was to assist Malawi "to realize more fully the potential contribution of the fisheries sub-sector to the economy, while ensuring that offtake does not exceed sustainable yields." This was to be achieved through four sub-objectives:

- Increase fish production as a means to improve nutrition and protein supply of the population
- Generate additional off-farm employment and income to help reduce poverty among women and the rural population
- Improve the institutional capacity of the fisheries sub-sector policy formulation, research, planning, monitoring and control
- Conserve the natural resource base of Malawi's water bodies and prevent environmental degradation.

3. "Involvement of IDA in the proposed project is necessary to strengthen the institutional capacity for fisheries research and fish farm management to ensure sustainable resource use, carry out regulatory functions to protect water bodies, and provide support to the private sector for economically viable and sustainable production activities." *Memorandum and Report to the President of IDA and Executive Directors.* February 25, 1991. Other donors' assistance included: FAO/UNDP support for the Mpwepwe Fisheries Training Centre and assessment of pelagic fisheries in the northern part of Lake Malawi; EEC financing for the Central Lakeshore Fisheries Development Project and the Central and Northern Region Fish Farming Development; GTZ support for the Malawi/German Fisheries and Aquaculture Project; ODA provided technical assistance for research by the Fisheries Department. Somewhat later, GEF provided a grant to the three riparian states of Lake Malawi/Nyasa for biodiversity conservation based on a large research and resource management program.

1.7 These objectives were to be achieved through four components over seven years at a total cost of US$15.5 million, assisted by an IDA credit of US$8.8 million and government contribution of US$1.1 million (Table 1). The Nordic Development Fund and Icelandic International Development Agency supported the fisheries production, training, and research activities and agreed to cofinance US$4.5 million with the Bank. It was expected that MALDECO would contribute US$0.6 million toward its commercial fisheries operations, and beneficiaries would contribute a further US$0.5 million.

Table 1: Project Components

Component	Cost US$ million	
	Appraisal	Actual
Production. Rehabilitate and develop exiting capture fisheries by supporting the traditional/artisanal fisherman, commercial and semi-commercial fishing activities, and establishing a pilot program to increase the involvement of women in fish production and marketing.	5.3	0.72
Infrastructure. Rehabilitate, upgrade, and build access roads, jetties for fish landing, and shore-based facilities	1.0	0.04
Institution Building Component. Strengthen the FD to enable it to concentrate on regulatory functions, staff training (particularly formulation, extension, monitoring and evaluation, and enforcement of fisheries laws), and technical assistance.	7.3	12.1
Research Component. Strengthen FD's research capacity and focus research activities on assessment of fish stocks, pilot lake conservation management programs and development of pilot fish farming models designed to integrate aquaculture into farming systems in different ecological zones with appropriate agricultural technologies.	1.9	2.3
Total	**15.5**	**15.1**

IMPLEMENTATION ARRANGEMENTS

1.8 The Ministry of Forestry and Natural Resources had overall responsibility and the Fisheries Department was charged with implementing the project.[4] An advisory Project Coordination Committee comprising ministries and agencies involved in project implementation was set up, but it proved to be ineffective in resolving problems and coordination issues. Within the FD, the credit supported an internationally recruited financial and management advisor to work with the director and two senior staff on management of the project — in practice these positions were filled by government retirees and proved ineffective. Field activities were the responsibility of Regional and District Officers and unit managers. However a dearth of senior staff and government's stop-go recruitment induced by budgetary and establishment problems meant that the FD only achieved design staffing levels six years after appraisal.

1.9 Six changes of Bank task manager and their differing ideas made managing the project complex, as did changing signals from the Ministry of Finance. This plus FD's administrative overload — not helped by dual responsibility for the Bank-executed GEF Lake Malawi/Nyasa Biodiversity Conservation Project — required that the FD director delegate project management to a project manager, and when that proved problematic, to a Project Coordination Unit (PCU) managed by an administrator and director assisted by an advisor.

4. The Ministry of Forests and Natural Resources was later renamed Ministry of Natural Resources and Environmental Affairs.

1.10 The PCU proved to be highly centralized, paid too little attention to field activities, and duplicated FD head office functions.[5] A 1994 initiative to decentralize management and finance to the field via a Project Administrative Unit proved to be effective. However, it later failed when the Ministry of Finance went through a consolidation of accounts in 1995 that recentralized the project's budget and financial management. Following strong pressure from the Bank, the FD then delegated day-to-day running in 1996/97 to a Project Management Group, which again pushed decentralization. After effectively piloting four regional cost centers using project funds, the MoF eventually adopted them in 1998/99, only to revert to two in 1999/00 in the name of cost saving.

2. Implementation

OVERVIEW

2.1 After a rather uneven start, an apparent rapid decline in fish production became evident and led to a substantial reformulation of project objectives in 1993 that adversely affected project outcome. The project was informally restructured in late 1994 because of concerns about over-fishing, FD budget allocation, and staffing.[6] General support for the project within the government was weak. Revenue budget for FD activities, including that for the Bank-assisted project, was unpredictable and generally far less than needed to maintain a viable department — or the staffing to execute the project — and the Bank neared cancellation for these reasons on several occasions.

FISH PRODUCTION

2.2 Production targets were radically reduced. All except the commercial part of the fish production component was canceled and only 16 percent its US$4.64 million budget was used. An alarming picture of over-fishing became available a year after appraisal from fish stock assessments assisted by FAO and the U.K.[7] The FAO Chambo Fisheries Project reported in 1991 that the *chambo* fishery in Lake Malome had collapsed and that the remaining *kumbuzi* fishery was under severe threat. In 1992, 'The U.K.-supported Traditional Fisheries Assessment Project reported that the Lake Malawi and Malome artisanal fisheries were at, or already beyond, the biological maximum sustainable yield, and that the deeper water trawl fisheries in Lake Malawi's two southern arms was in decline following 20 years of stable production. In consequence, the FAO/Bank supervision mission of August 1993 recommended that the project be restructured away from increasing production to resource management and maintenance of production within sustainable limits.[8] This in turn underscored the need to extend the field presence and effectiveness of the FD, giving more importance to regulation, management, and extension programs, all of which had been downplayed during appraisal.

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5. This finding is in line with OED's findings from other evaluations: that many project implementation units become specialized enclaves that take the best staff from an organization, do not mainstream the implementation experience, and thus weaken the overall effectiveness of an agency.

6. The reformulation of project objectives was not approved neither by the Bank's Board of Executive Directors nor the Malawi Country Management Team.

7. FAO's Chambo Fisheries Research Project (MLW/86/013), and the U.K.'s Demersal Fisheries Reassessment Project.

8. Toward the end of the project (1998), the interim results from the parallel GEF-financed Lake Malawi/Nyasa Biodiversity Conservation Project showed that the earlier concerns about over-fishing of Lake Malawi were unfounded — although there were localized inshore areas of over-fishing where artisanal fishermen were most concentrated.

2.3 As a result, the Bank proposed that the incremental production target of 7,500 tons be dropped. Following independent review, the Nordic Development Fund (also representing ICEIDA) was more sanguine and proposed a moratorium on semi-commercial fishing until more convincing proof was made available using the new research vessels.[9] However, the Bank's view remained unchanged with one exception: it retained the production target of 1,500 tons derived from MALDECO because the new trawler was able to access much deeper unfished stocks which had been identified by ODA/SADC research. It was also found that the fish farming component, which was supposed to produce 176 tons/year, duplicated EEC's Central and Northern Fish Farming Project and, because it was believed that this was a high-risk venture and would strain FD's management capacity through unnecessary diversification, this was also dropped.[10] The funds available from dropped activities were reallocated to the institutional development component for civil works (para. 2.15).

EMPLOYMENT GENERATION AND CREDIT

2.4 **Women in Fisheries.** Female-headed households constitute about 25 percent of smallholder farmers, and more than a third of these have holdings less then half a hectare of land. Alternative income-generating activities were therefore important to poverty alleviation.[11] The emphasis of the pilot was to minimize post-harvest losses and increase women's earning power through training in fish handling and quality control; preservation via smoking kilns and cool storage; technical and business skills; and credit for these activities. A baseline survey and action plan was completed in 1994 following recruitment of a Senior Woman's Program Officer to FD headquarters, and temporary recruitment and posting of three Women's Program Officers to the field.[12] Coupled with FD's extension efforts, the pilot managed to form 260 credit groups. But lack of interest in the FD and Bank — both of whom felt it strained FD's managerial capacity — led to the cancellation of the women's program in 1996 and non-renewal of WPO's contacts.[13] Difficulties with credit availability meant that only 23 of the original women's groups became sustainable — and even then most activities were outside fisheries.

2.5 **Credit.** Credit was difficult to access and very expensive. The project budget included a US$662,000 line of credit for investment in artisanal fisheries and US$200,000 for the women's program. Before the credit program could get off the ground — a task made difficult by poor coordination between the FD and Smallholder Agricultural Credit Administration (SACA) — the return to democracy and lack of good governance allowed political interference in the agricultural credit program which led to massive loan default and bankruptcy of SACA in 1993. In response, the Bank and IFAD hastily assisted set-up of the semi-commercial Malawi Rural Finance Corporation (MRFC) under the Rural Finance Services Project and MRFC took over the project's credit components.

2.6 Initially, the MRFC paid little attention to the needs of the fisheries subsector and this was not helped by the cancellation of the project's line of credit in 1996 (as before, to lessen the burden on FD) and its reallocation to the institution building component. However, in 1997,

9. Letter to the Bank, December 1, 1993.

10. While the rationale for these revised objectives were rehearsed on each subsequent mission, and at mid-term review (March 1996), there was no formal amendment of the Development Credit Agreement.

11. Okidegbe, Nwanze, and Paolo Melchiori. 1991. *Women in Fisheries.* Working Paper for the IDA Malawi Fisheries Development Project, April 1991.

12. The WPOs were recruited on 16-month non-establishment staff contracts and reported to the District Fisheries Officers.

13. One WPO is now a regular FD staff as a District Fisheries Officer.

MRFC initiated training in rural micro-credit procedures for FD district staff who then became very proactive in development of credit groups among fishing communities assisted by MRFC staff. In all, 259 credit groups of 10 to 25 members were formed and 196 of these were trained. These included 122 women's and 65 mixed groups covering 4,000 women. By April 2000, 123 groups had received loans — all of less than $100 and for a maximum of one year. Medium-term loans for up to five years envisaged at appraisal were not part of MRFC's package for fishing communities.

INFRASTRUCTURE

2.7 Most of the original infrastructure component was canceled when the production component was reduced. Access roads were not built, there was minimal upgrading of the Mpwepwe boatyard, and only landing facilities (piers and slipways) were improved at Monkey and Nkata Bays. Instead, the unused infrastructure budget was added to the FD institutional development budget for construction of a head office in Lilongwe, training facilities at the Malawi College of Fisheries at Mpwepwe, and District Fisheries Offices and staff quarters at seven locations.[14]

2.8 FD was unable to manage the procurement and contracts related to civil works and these became contentious issues between government and IDA during supervision. After a five-year delay, most of FD's civil works were contracted, but poor management, contractual problems including default, and complete redesign and site changes of the HQ office, led to costs four and half times appraisal estimates — and even then some of the buildings are inappropriate for the decentralized FD: the FD office at Mangochi and College of Fisheries are over-sized for their function, and elsewhere, essential District Office buildings are incomplete.[15]

2.9 At Nkhata Bay and Chilumba for example, the assessment mission observed that the District Fisheries Offices and other facilities are unfinished because the contractor had stopped working in August 2000. Nkhata Bay laboratory has no roof, and it and two staff houses have no plumbing, water, or electricity facilities installed and numerous other items such as doors and windows are missing. Seven staff houses at Monkey Bay and the boat shed/workshop have remained incomplete for two years — the houses are unoccupied, the workshop unusable and all are deteriorating. Further enquiry in the field and Lilongwe revealed that all of these civil works had been certified as complete by an inspector from the Ministry of Works and Supply and there thus appears to be a *prima facie* case of corruption.[16] And the shortage, or poor quality, of staff housing is affecting staff efficiency and morale. For example, at Monkey Bay, seven FD research staff have to make a 60-kilometer round trip each day. The Fisheries Offices/Laboratory at Nkhata Bay occupy a large compound in the center of the town near the market, and locals are quick to point out the ineffectiveness of World Bank aid.

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14. Bangula, Chilumba, Karonga, Mangochi, Monkey Bay, Nkhata Bay, and Selima.

15. The Fisheries College has a capacity for 80 full-time students and can accommodate 46 boarders. In year 2000 it ran two technical courses training 12 and 30 students respectively. It also non-residential courses for fishermen, training 100-120 over 2-3 days. The relatively lavish buildings accommodation is only partially used — a luxury for Malawi, where many villages and towns cannot afford school buildings and teach their pupils in the open.

16. Although certified as "complete," the standard retention money of 10 percent had not yet been disbursed by the FD — even so, physical completion would cost far more than this and thus there is no incentive to complete outstanding works. On four sites visited by the assessment mission, it appears that the works are unfinished because site workers stopped work when it became clear that they were not going to be paid by their employer. This potential corruption issue was raised by the Bank mission at the wrap-up meeting with the Principal Secretary of the Ministry of Forestry and Natural Resources who stated that he would set up an internal investigation.

2.10 Procurement of a large quantity of vehicles, boats, and computer equipment was far less troublesome and potentially strengthened the FD's field effectiveness.[17] The procurement of the 17-meter research vessel Ndunduma under the ICEIDA grant and the MALDECO trawler under the NDF grant went very smoothly. But much of this potential remains unrealized because inadequate FD budget, particularly to District Offices, restricts use of vehicles and boats as both fuel and maintenance are in short supply, and several offices have had their telephones disconnected for non-payment of bills.

INSTITUTION BUILDING

2.11 Up until mid-term review in 1996, the FD was generally ineffective in executing the project and reacted passively to the downsized production component and Bank's restructuring proposals. Following a recommendation that there should be no Bank action on disbursement requests, government and the FD quickly produced, assisted by the Bank, a six-month Fisheries Development Project Document that came up with a well-defined and sequenced strategy to put the restructured project back on track. Subsequently, from 1996, the FD produced acceptable annual work plans, performance monitoring indicators, and progress reports, all of which had been overlooked at appraisal. The FD prepared the ground and oversaw national consultation that led to the 1997 Fisheries Conservation and Management Act.

2.12 Over the course of the project, the FD downsized from 359 staff in 1996 to 322 in 2000. While headquarters staff increased only slightly, professional and senior technical staff posted to field activities more than doubled from 10 to 23, and junior technical field staff fell by more than a third – partly through promotion, and partly from downsizing, incapacity and AIDS. An active training program benefited both FD staff and fishing communities, but formal outcomes are unknown. Almost a quarter of the FD's staff underwent long-term technical training (some overseas) and nine short courses built managerial, extension, research, and financial skills.[18]

2.13 The 11 Mpwepwe College of Fisheries staff were upgraded through foreign-based training and they in turn have trained about 300 members of fishing communities in 12 sessions. In addition, during 2000 they conducted training for 30 junior pre-service FD technicians and 12 sessions for in-service staff.

RESEARCH

2.14 The research component was designed to help FD develop and implement research plans, fish stock assessment, monitoring and evaluation of fishing effort, and coordinate research activities with other donor-supported efforts. A research vessel and fisheries biologist were provided by Iceland and the infrastructure and research staffing at Monkey Bay was upgraded. Systematic surveys of the southern lake, conducted from 1993, identified significant deep-water fish stocks (4,000–5,000 tons) and proved that the original concerns about overall resource mining were unfounded.

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17. Procurement included 41 vehicles, 57 motorcycles, 25 boats, computer equipment and office furniture.

18. The project supported FD staff to obtain a Ph.D., 5 MScs, 6 BScs, 14 Diplomas, and 11 Certificates.

3. Ratings

OUTCOME

The outcome criteria take into account the extent to which the project's major relevant objectives were achieved, or are expected to be achieved, efficiently.

3.1 Although the project objectives were substantially reformulated, this was done informally and was neither approved by the Bank's Board of Executive Directors nor by the Bank's Country Team. In consequence, project achievements are rated against the original objectives (para 1.6) and not those adopted at restructuring in1994. On this basis, the assessment rates project outcome unsatisfactory as it failed to achieve most of its relevant objectives and had only minor development benefits. While relevance was high, the project was inefficient and its efficacy — the power to produce results — was negligible. The justification for this rating is elaborated below.

RELEVANCE

Were the project objectives right? Relevance 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.

3.2 The project objectives were and remain highly relevant. They are consistent with the Bank's Country Assistance Strategy for public sector agencies and poverty alleviation objectives. Malawi's Fisheries Conservation and Management Act of 1997 affirms the continued relevance of fisheries management and regulatory objectives and enhanced participatory management. The project redressed the lack of reliable data to plan and manage fish production from Lake Malawi and correctly identified over-fishing of inshore waters. Its proposal to enhance the capacity of the traditional/artisanal fisheries and move them offshore was relevant. Enhancing the capacity and efficiency of the FD was and is a high priority. While the objective to rid the FD of its commercial activities was correct, the full implications of the divestiture on Malawi's fisheries sector culture was were not examined. In hindsight, given the production problems, its relevance was modest at best.

EFFICACY

Did the project achieve its stated objectives? Efficacy is a measure of the extent to which the project's objectives were achieved, or expected to be achieved, taking into account their relative importance.

3.3 The audit rates the overall efficacy negligible based upon achievement and relative importance of the development objectives (Table 2) as detailed below.

Objective 1: Increased fish production was not achieved

3.4 **Incremental fish production was negative.** While MALDECO increased its net catch by an average of 900 tons/year, semi-commercial catches declined by about 2,000 tons/year, and increased efforts by the traditional/artisanal fisheries, because of the inshore concentration, have also led to declining catches.[19] Therefore, there was a decline in production of at least 1,100 tons/year as described below.

Table 2: The Extent to Which the Project's Development Objectives Were Achieved

Objective	Relative Importance	Achievement
1. Increase fish production as a means to improve nutrition and protein supply of the population.	High	Negligible
2. Generate additional off-farm employment and income to help reduce poverty among women and the rural population.	High	Negligible
3. Improve the institutional capacity of the fisheries sub-sector policy formulation, research, planning, monitoring, and control	High	Modest
4. Conserve the natural resource base of Malawi's water bodies and prevent environmental degradation.	Substantial	Negligible

3.5 **There was minimal support to traditional/artisanal fishermen.** The objective to move fishing activities offshore and increase fishing efficiency to increase production by 2,400 tons/year was not achieved. At appraisal, it had been intended that 50 fully-equipped fishing boats and 200 improved plank boats (to replace dugout canoes) would be constructed by the Selima boatyard and then and sold to groups of fishermen using SACA credit. However, the boatyard ceased to be viable after meeting the Bank's stipulation that they be privatized, and thus no new boats were constructed. A negative impact of this is that the poor condition of the traditional/artisanal fleet limits fishing to sheltered inshore waters, further intensifying localized over-fishing. One consequence is that while the number of small inshore boats and fishermen has increased by about a quarter since 1995, production has fallen by almost 10 percent — but locally the outcome is worse. For example, at Chiundasi village in Nkata Bay district, the beach village community told the assessment mission that inshore catches were down by half over the past five years.

3.6 **Semi-commercial fisheries have faded away.** At appraisal, only 10 of 15 licensed paired-trawlers were operational because of inadequate maintenance, and even then they operated considerably below their production potential. The project aimed to provide eight fully-equipped paired-trawler units for sale to fishing groups, which would permit an additional 3,300 tons/year of fish production. Following the Bank's recommendation that the non-commercial fishing expansion should be curtailed, the FD made little effort to implement this component primarily because of the difficulties of maintaining boat production at Mpwepwe. In addition, the FD did not use Nordic Development Funds to either replenish government stocks of engines and spares (which had been fully used by the early 1990s) or purchase trawl nets and ice plants. As a result, the paired-trawler fleet continued to decline and only four units were operational at the end of the project. Thus, instead of increasing, fish production actually fell by about 2,000 tons/year with substantial negative impacts on poverty alleviation.[20]

3.7 **But commercial fisheries have been rejuvenated.** Following 30 years of neglect while in state ownership and after privatization in 1989, MALDECO was successfully rejuvenated. Nordic Development Funds were used to provide a new 17-meter multi-purpose deep-water

19. GTZ. 2001. Socio-Economic Survey No.1 Msaka Village (Namkumba Peninsula). Report by Elvira Ganter, National Aquatic Resource Management Program, Department of Fisheries, Malawi.

20. The average fish production from the pair-trawler fleet was 3,130 tons/year in the period 1986–91. Production in 1996 (the latest year with records) was about 1,150 tons.

fishing vessel and supporting processing, cold storage, and transport that was fully operational by 1997. To balance the increased catch-efficiency and meet sustainability concerns, MALDECO decommissioned two small stern trawlers in 1995–96 — a condition of use imposed by the Bank. The rebuilding of MALDECO's commercial fishing capability was successful even though it only achieved about 60 percent of its 1,540-ton incremental production target. Gross margins increased from US$390,000 in 1994 to over US$1 million by 1999, and the company returned to profit in 1995 after more than a decade of losses. In 1999, profits were over US$400,000. At the time of the assessment, OED found that, prompted by these profits, several private medium-sized fishing vessels were under construction or in operation — some owned by high-level government officials and politicians.[21]

Objective 2: Neither additional off-farm employment nor improved nutritional and protein supply objectives were achieved

3.8 While there is a greater number of traditional/artisanal fishermen, they are employed less productively (para. 3.6). Increased employment at MALDECO is marginal — about 80 persons. There were some modest and small-scale gains to employment from the revised rural credit component, but these are unlikely to be sustained. The overall net decline in fish production reduced the supply of fish protein to the population.

Objective 3: Institutional capacity was improved — albeit unevenly

3.9 **The regulatory and management environment improved.** An innovative feature of the Fisheries Conservation and Management Act was provisions for co-management of fisheries through legally binding agreements between government and recognized fishermen's organizations. Allied with extensive training, a rejuvenated FD extension program is now actively working with groups of fishermen assisted by technical assistance from GTZ to form beach village communities (Box 2).[22] While individual community efforts are clearly effective at managing local fisheries, attempts by DFOs to expand this program have been hindered by inadequate operational budget, which curtails other than local travel. Regulatory activities, which require regular patrols on Lake Malawi, are similarly affected.

Box 2: Beach Village Communities Work

The Chiundasi Beach Village Committee of 12 members was formed in 1999 following FD outreach — as they said, "they didn't need persuading, the fish belonged to them and they had to control fishing." Traditional leaders facilitated the process and the village elected the committee members. The traditional village chief reserves his authority to remain impartial. The primary function of the committee is to preserve fish resources along the 4-kilometer beachfront in their community, which they do by regulating access. Each member has to pay a fee, or be fined. The committee police the closed season, net mesh size, and restrict long-lines to 250 hooks. Lamps are forbidden close inshore and fishermen taking small fry face a stiff fine (MKW 15,000). They are unable to regulate more than 1-2 kilometers offshore as they cannot afford a motorized boat. Major problems they face are lack of credit and poor access to markets. They have no capital to undertake other businesses even though production has halved since 1998. Other committees visited by the mission had their own bylaws regulating fishing which had been endorsed by the FD. And four of 12 committees in the Nkhata District collect license fees from members on behalf of FD — the remainder await FD training.

21. Two such vessels were being built at the privatized Mpwepwe shipyard.

22. Village beach communities were developed by the FD under the former by the GTZ-financed the Malawi-German Fisheries and Aquaculture Development Project. The ongoing GTZ National Aquatic Resources Management Programme is building on these efforts.

3.10 **Local training needs reorientation.** The course syllabi at Mpwepwe were recast but appear to miss some fundamentals (an understanding of Lake Malawi's fisheries and fishing gear technology) while dwelling on areas where there is little demand (fish farming) or where FD is no longer involved (boat building). Very expensive mechanical and woodworking workshop equipment was provided but remains unused, and facilities for marine engineering duplicate government's mechanical engineering courses elsewhere. Senior District Fisheries Officers said they needed junior staff who understood the local fisheries, could work on extension efforts, understood enforcement and regulation, and could help with micro-finance of fisheries — not trainees with "theoretical blackboard learning." These issues need resolution to support FD's plan to make the Mpwepwe College a regional fisheries training center for the SADC countries in order to defray high operation and maintenance costs. Indeed, College finances are so precarious that its management is actively considering commercial fishing to boost income.

3.11 **But FD's budget allocation is still an issue.** In addition to capacity building, decentralization introduced at mid-term review and the Fisheries Act helped to make the FD more effective in the field, particularly at co-managed regulation. Unfortunately, generous field allowance incentives (which almost doubled salaries) were introduced by the project and their cessation is now proving counter-productive, particularly for mid-level and junior staff. Despite this, senior field staff appeared to be highly motivated and able to produce some results despite unpredictable budget support from Lilongwe. Most expressed concern that FD headquarters always took their full share of reduced budgets leaving little to the field. And even headquarters staff said that non-transparent and arbitrary budget management appeared to be among the most contentious issues.[23]

3.12 Ironically, despite the project's aim to divest the FD of commercial activities, the FD now uses the research vessel (see para. 2.14) for commercial fishing to generate income to cover operation and maintenance costs — and several expatriate researchers stated that commercial activities are squeezing out the research program.

3.13 **Divestiture of FD's commercial activities led to their demise.** To enable the FD to focus more on management and regulatory functions and open the field of service provision to private sector entry, the Bank made divestiture of its commercial activities a dated covenant of the credit. Accordingly, in 1993 the FD ceased to engage in commercial fishing, production and sale of ice, marketing of fishing gear, motor spare parts, and fuel. Following the closing of the boatyard at Selima, its withdrawal from boat building was more protracted. The brutal closure — staff dismissal and auctioning of the equipment to local joinery firms — of the Selima boatyard proved to be very unpopular because they produced a boat very well-liked by artisanal fishermen. And as the private sector was either uninterested or ill-positioned to assume the mantle dropped by government, most staff migrated to the local joineries, leaving only a few isolated boat builders.

3.14 The government was embarrassed by this failure — as the Secretary for Forestry and Natural Resources wrote to the Bank: "we made a mistake at Salima, at the insistence of the Bank, and I think we should proceed more carefully."[24] Thus the remaining boatyard at Mpwepwe was left ticking-over with minimal support for almost six years while a decision was taken privatization, and if so, how. Eventually, it was subject to a management buyout by former

23. Staff stated that Treasury only reconciles major expenditures and does not look at how they relate to the agreed budget, which is unilaterally reallocated by the Director FD. The Chief Accountant's view was that a large chunk of FD's budget is used for unauthorized foreign travel and that a friend in Treasury makes ex-post adjustment to keep the books straight.

24. Letter to the Bank dated November 4, 1993.

FD staff in 1998 for US$3,000 and the new Mpwepwe Shipyard Company assumed debts of about US$50,000 — but this more than offset by the land value, and new machinery and two trucks provided under the credit. Shortly after privatization, the project placed orders for 12 small plank boats for use by the FD in the districts and imported 13 aluminum patrol boats. The plank boats that have been delivered were crudely built and often required repair before they were seaworthy.[25] Current output and quality is low, and the Mpwepwe Shipyard Company appears to be non-viable.

3.15 With FD's withdrawal from marketing fishing gear, net sales have plummeted and the Blantyre Netting Company has announced it is withdrawing from net manufacture.[26] Profits are too low to attract the few private sector entrepreneurs. As a result, fishing efficiency has also declined.

3.16 **Credit was only modestly effective.** Interviews by the assessment mission reveal that most of the loans are managed by women. (Some are into a second round of loans). Loans tend to be used for small commercial activities — selling sugar, salt, oil, second-hand clothes, and fish buying/selling. Men interviewed expressed frustration with the small and short-term nature of the credit for fishing gear, motors, or boats. Indeed, MRFC staff regarded fishermen's credit needs as highly risky given the mobility of the assets purchased and absence of alternative collateral. And to make matters worse, interest rates are now too high even if more credit and better terms did become available — they have risen steadily from 23 percent in 1997 to 49 percent in 2000 compared to the appraisal assumption of 15 percent. The future of MRFC is also uncertain. On completion of Bank support for the emergence of MRFC from the ashes of SACA (see para 2.5) in 1999, OED rated the outcome as marginally unsatisfactory because the lack of conducive supporting policies, weak institutional support and low borrower capacity to run MRFC.[27]

Objective 4: The conservation objective was not achieved.

3.17 Rather than enhance coordination to support fish production and FD extension activities, the conservation and monitoring subcomponent and expatriate fisheries specialist were transferred to the GEF biodiversity project where their work created synergy. However, the conservation component was subsequently captured by the GEF project and became exclusively research-oriented and impractical, and sustainable yields were not established. On the supply side, fish production from Lake Malawi is probably under-recorded - a nationwide monitoring and evaluation framework was not established to link together routine catch landing surveys carried out by the District Fisheries Offices and the FD Research Unit at Monkey Bay.[28]

3.18 The failure of the production component increased the pressure on in-shore fisheries, which threatens both sustainability and biodiversity conservation objectives. Localized over-fishing negatively affected efforts to conserve the rich biodiversity of Lake Malawi's endemic cichlid fish species and undermined the conservation and management objectives of the parallel and Bank-executed GEF Lake Malawi/Nyasa Biodiversity Conservation Project.

3.19 All the ice plants ceased to operate after divestiture and the small-scale fisherfolk have considerable difficulty in preserving their fish. Although some new ice plants have been built by

25. Based on inspection at Nkata Bay, Monkey Bay, and Mpwepwe.

26. Personal communication, Director of Fisheries.

27. OED. 2000. Evaluation Summary of Credit 2513-MAI – Rural Finances Services Project.

28. A major problem is that much of the traditional and artisanal fish landing is underestimated because FD's beach recorders no longer have any incentive to do night work.

the private sector they offer very limited services to fishing communities. While sun-drying is the cheapest option, as much as 40 percent of catches cannot be preserved this way during the wet season and smoking kilns are the only other alternative. And even this augments rapid depletion of forest reserves of the country which, allied with poor watershed management, increases sediment runoff into Lake Malawi leading to a less productive resource base.[29]

EFFICIENCY

Was the project cost effective? Efficiency is a measure of 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 with alternatives.

3.20 At appraisal, it was expected that the incremental fish production would be 7,500 tons yielding an economic rate of return (ERR) of 20 percent. On completion, and with all the project funding spent, there is a net loss of production and the "benefit" stream did not occur. Worse, the few project benefits were highly skewed toward the commercial sector, while the negative effects of the project fell wholly on the poorest and most vulnerable non-commercial and semi-commercial fishermen. Excessive delays and redesign increased costs. Because of only partial data, an ex-post ERR was not calculated. Capacity utilization of facilities and equipment provided is modest either because they are unfinished or lack of budget precludes full use and adequate maintenance. Apart from infrastructure and building expenses, "project funds kept the FD afloat" according to the Director FD and thus had little incremental impact. Overall, the indicative benefit steam is negligible compared with costs, and overall efficiency is rated negligible.

INSTITUTIONAL DEVELOPMENT

Has the project led to better management of human and financial resources? This is a measure of the extent to which a project improves the ability of a country or a region to make more efficient, equitable, and sustainable use of its human, financial, and natural resources through better definition, stability, transparency, enforceability, and predictability of institutional arrangements.

3.21 Institutional development is rated modest as evaluated for objective 3 above (paras. 3.9–3.16).

SUSTAINABILITY

Are the results likely to last? Sustainability is evaluated by assessing the resilience to risk of net benefits flows over time

3.22 The assessment rates sustainability of the few achievements as unlikely. Nationally, natural resource consumption driven by dire poverty is a major management challenge that adversely affects the environmental sustainability of watersheds and Lake Malawi. While the results of the training, knowledge building and research within the FD and MALDECO are likely to last, sustainability in the public sector is unlikely. Chronic budget shortfall is unlikely to improve and this curtails FD's field, extension and research work. Fisheries management, helped by major advances in environmental legislation which encourage stakeholder involvement in community-managed fishery regulation and watershed management, is slowly improving. But

29. Studies financed by CIDA and carried out by the Freshwater Institute (FWI) of Canada under the GEF biodiversity project showed that increased land use and nutrient inflow has adversely affected the lake's water quality, decreased water clarity, and is in danger of causing a thinning of the oxygen and species-rich upper layers of the lake. The quality of inflowing river water is declining and rainfall water quality is affected by atmospheric pollution caused by deforestation and bush-burning.

credit institutions are averse to the risks of the fisheries sector and lending is too short term, so it is likely that the decline in fishing efficiency will continue. It is also likely that the adverse impact of the project has undermined the fishing communities' confidence in the relevance of FD advice. Small-scale fishing on the lake is increasing, yet production and incomes have decreased. Between 1995 and 1999, the number of inshore boats increased by about a quarter and the number of fishermen by 16 percent — yet production fell by almost 10 percent.[30] Current small-scale inshore fishing efforts exceed sustainable fisheries resources and interventions to reverse this are still under discussion. Sustainability is thus unlikely.

BANK PERFORMANCE

This is a measure of the extent to which services provided by the Bank ensured quality at entry and supported implementation through appropriate supervision (including ensuring adequate transition arrangements for regular operation of the project).

3.23 Bank performance is rated unsatisfactory. Appraisal was very poor and quality at entry was unsatisfactory. Performance indicators and a monitoring and evaluation framework were absent. While acknowledging that the management of the FD was weak and capacity was limited, project design was complex and included several components where the FD had no experience. Contracting and procurement problems could have been avoided. Divestiture of commercial activities was premature given weak private sector capacity and incentives following years of dictatorial control. Hasty decisions were made to cancel the production components and these were not reinstated when research showed adequate deep water fish stocks. Using project budget to support FD field activities overlooked issues of sustainability and failed to address the root problems. Nothing was done to mitigate or reverse the adverse development impact of the project on the weakest parts of the fisheries sector and fishing communities. And, rather than ensure alignment of the parallel GEF biodiversity project's outputs to support fisheries production, the Bank allowed this to become a specialist enclave effort devoted to research (a summary of OED's assessment of this project is in Annex D). Frequent changes in task manager made supervision ineffective for the first three years, and while there was marked improvement in supervision toward the end of the project, it was too late to overcome poor design and inappropriate project restructuring.

3.24 Performance of the two cofinanciers, NDF and ICEIDA, was highly satisfactory. ICEIDA more than doubled its project grant, which enabled additional specialist support for the fisheries research program.

BORROWER PERFORMANCE

Borrower performance is rated by the extent to which borrower assumed ownership and responsibility to ensure quality of preparation and implementation, and complied with covenants and agreements, toward the achievement of development objectives and sustainability. The audit rates borrower performance as unsatisfactory.

3.25 Borrower performance was generally unsatisfactory. Government had weak ownership of the project and its support for the fisheries sector was undermined by continued financial and macroeconomic problems. While the 1996 National Policy Statement for Fisheries and the new Fisheries Conservation and Management Act of 1997 was a notable accomplishment, the chronic failure to provide adequate operational budget undermined FD effectiveness, as did several reversals of decentralization policy. Some elements of contract management and payment appear to be corrupt. For most of the project, national coordination and management of the FD was poor

30. Malawi Department of Fisheries. 1999. Frame Survey. Personal communication, Peter Jarchau GTZ.

and this led to excessive delays in appointing essential staff, redesign and cost overruns for its new headquarters building, and developing an effective organization to manage the project. Fisheries management training and facilities appear to be supply-led and financially unsustainable. Decentralization of FD activities was eventually achieved, but field effectiveness is being undermined by excessive budget consumption at headquarters and inadequate field budget for extension and regulatory activities.

4. Findings and Outlook

4.1 The Bank stated that its entry into the fisheries sector was necessary for the sector's survival (para. 1.4). While there was a marked improvement in the policy and regulatory environment, most of the major positive impacts have resulted from building on other donors' initiatives and sustained involvement. Yet after nine years of involvement, fish production has continued to decline, traditional/artisanal and small-scale commercial fisheries have been marginalized, and the modest improvements to the FD are hamstrung by erratic and declining budget support from government. Not surprisingly, the decline of the fisheries sector — augmented by Bank's apparent indifference to the project's adverse effect on poverty alleviation of the poorest fishermen while at the same time supporting private sector commercial activities, and condoning non-prudent management of project funds for FD's civil works program — has damaged the Bank's reputation in Malawi.

4.2 Clearly, neither the Bank nor Malawi had learned any lesson from the experience of earlier Bank-supported rural development programs. The first lesson listed for the 1996 PAR of the Agricultural Adjustment Credit was that "to significantly reduce poverty in Malawi requires that the (poor) smallholders be treated at least as well as the (better off) estates."[31] And the sense of déjà vu is heightened by the experience of the smallholder agricultural sector in the late 1980s and early 1990s: neither agricultural staff nor macroeconomists at the time saw the lagging smallholder sector as being a problem of developing small business enterprises in agricultural production and related activities.[32] Subsequently, policies have changed and smallholders have diversified from subsistence maize into cash crops with notable success. Similarly, the subsistence fisheries sector needs help to modernize, move offshore and become commercially viable.

4.3 Government officials at all levels were very critical of the Bank's performance and believed it to be a very unequal partnership. They felt that Bank staff had preconceived ideas, and were unwilling to consider local views, knowledge, and expertise in project design and restructuring. There were complaints that the Bank's Country Office was not very helpful (on day-to-day problems) and that much time was wasted as most issues were referred to Washington for decision.[33] There is clearly a need for the Bank's in-country management team to be more proactive in identifying and managing risks, dealing with high-priority issues, and ensuring a closer alignment of the lending program with the stated aim of the Country Assistance Strategy.

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31. OED. 1996. Project Performance Audit Report on Agricultural Sector Adjustment Credit. Report No. 15641.

32. OED. 1998. Impact Evaluation Report. Malawi – the World Bank and the Agricultural Sector. Report No. 17898.

33. These comments are totally consistent with the Bank's Malawi Client Survey 2000, which collated a whole range of opinions about the Bank's effectiveness in Malawi. See http://afr.worldbank.org/MW/updates/cfs2000/MarDRAFT2_Cover.doc

FIVE MAJOR FINDINGS:

1. Failure to undertake realistic appraisal of institutional capability risks overloading projects with unachievable objectives and components.
2. Hasty reaction to unsubstantiated threats to the sustainability of natural resources may have perverse consequences. In this case, fear of over-fishing led to cancellation of measures to promote deep-water fishing. This increased pressure on fragile inshore fisheries, threatened biodiversity conservation efforts, and hindered poverty eradication.
3. Divestiture of public sector commercial activities should be preceded by a thorough institutional analysis to determine if sufficient incentives and capacity exist within the private sector, particularly when earlier political regimes did not encourage independent private sector initiatives.
4. The Bank should ensure that parallel projects with overlapping objectives in the same sector are adequately coordinated to maximize development impact.
5. Partnership with bilateral development agencies (who had a comparative advantage in many areas) were successful because of a clear definition of roles and carefully structuring of procurement responsibility.

OUTLOOK

4.4 The outlook for the fisheries sector in Malawi is uncertain, particularly as its largest resource, Lake Malawi, is shared with Mozambique and Tanzania. The government has yet to agree on a sector strategy that integrates management of capture and culture fish production with efforts to conserve Lake Malawi's unique biodiversity and sound environmental management of the lake's watersheds. And reaching a consensus on conservation and management approaches with co-riparians will be neither quick nor easy. The unique biodiversity of Lake Malawi is a global commons and there is a strong case for continued international assistance. Accordingly, a follow-up GEF project is planned to address lake management issues and a second phase of the Fisheries Development Project is also possible.

4.5 Malawi, assisted by the Bank and in consultation with CIDA, DANIDA, DFID, ICEIDA, NDF and SIDA, is proposing a GEF Lake Malawi Ecosystem Management Project (LMEMP) – appraisal in planned for May 2002. Much of the high level of interest in this new project was catalyzed by the series of workshops carried out by the Bank's Africa region during the preparation of the intensive learning ICRs, and it is responsive to OED's recommendation from the earlier assessment of the GEF biodiversity conservation project.[34] The main objective of the LMEMP is awareness raising and mobilization of riparian stakeholders and sector agencies in the three countries towards an ecosystem management approach for Lake Malawi and increased political commitments to a strategic action plan.

4.6 It is clear that the proposed project intends to mainstream the lessons learned from community and co-management of fisheries resources under the assessed project, the DANIDA-assisted coastal environmental management project, and the Malawi-German national aquatic resource management program. The experience from these pilot activities will be built into more effective extension programs and expanded co-management of fisheries resources. FD needs to increase its attention to extension, regulation, monitoring and evaluation activities, and address the severe budget constraints. Currently, minimal license fees are levied and collection is low — even then all are remitted to the central treasury. One way of reducing the budget problem locally

34. As described in the GEF Supplemental PDF–Block B Grant proposal to cover project preparation, LMEMP will cover fisheries resource management; institutional arrangements and support to decentralization; stakeholder consultations, exchange and building of informed local constituencies; integrated watershed management; and regional cooperation.

would be to increase license fees in line with gear and boat potential, and allow collections to be retained by District Fisheries Offices to support regulatory and extension activities.[35]

4.7 There is still, however, a long way to go to make the FD effective. Central headquarters needs further reduction to focus on fisheries policy, strategic planning, and management. At the same time, using the principle of subsidiarity, greater authority should be devolved to the district level and stand-alone units (e.g., research at Monkey Bay, training at Senga Bay and Mpwepwe). District Offices could form sub-regional centers and be co-managed by FD officials and local stakeholders, including the private sector, care being taken to ensure that FD retains independence on regulatory matters and evaluation.

4.8 But until fishing boats, gear, processing, marketing facilities, credit availability, and access are improved, the outlook for increasing regulation, conservation, and income generation is bleak. One of the highest priority tasks is to regenerate the local boat-building industry and increase mechanization. The Director of Fisheries has aptly summarized the problems and challenges:[36]

> *"Lake Malawi's fishing industry is slowly sliding backwards towards the dark ages with growing numbers of participants deploying ever lower levels of technology. The sector is characterized at least as much by missed opportunities as it is by excessive fishing pressure and over-exploitation. It needs re-direction, increased mechanization, and better services. And until it gets them, around 40,000 tons of fish — fish which could feed people and provide employment — will continue to die peacefully in their sleep each year and sink, forgotten, to the bottom."*

35. For example, FD staff at Monkey Bay report that a fisheries license for a commercial fishing boat able to catch about 400 tons/season costs about $250. At the time of the assessment, this catch was worth about US$150,000, thus the fee represents less than 2/10ths of this value. Conversely, a fee of 5% would yield $7,500 and provide a great incentive for the FD to step up regulation.

36. Mapila, S.A. 2001. A dialogue on the development, research, declining yields, declining stocks and environmental degradation of the Malawian fishing water. Memorandum to the Fisheries Department. Lilongwe.

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Annex A. Basic Data Sheet

MALAWI FISHERIES DEVELOPMENT PROJECT (CREDIT 2225-MAI)

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

1995-2000	*Appraisal Estimate*	*Actual or current estimate*	*Actual as % of appraisal estimate*
Total project costs	15.5	15.1	97%
IDA	8.7	7.88	91%
NDF	3.5	2.81	80%
ICEIDA	1.0	2.13	213%
Cancellation		0.82	9%
Economic rate of return	Not applicable	Not applicable	-

Project Dates

Steps in project cycle	***Original***	***Actual***
Project Concept Document	-	8/16/89
Appraisal	-	5/30/90
Board presentation	-	4/02/91
Effectiveness	9/04/91	9/04/91
Mid-term review	6/30/95	3/11/96
Loan closing	5/30/99	5/30/00

Staff Inputs (staff weeks/cost)

	No. staff weeks	*US$ (,000)*
Identification/Preparation	44.4	34.0
Appraisal/Negotiation	51.7	133.8
Supervision	185.92	466.4
Completion	10.0	20.0
Total	292.02	654.2

* Not including FAO/CP ICR Mission.

Mission Data

	Date (month/year)	No. of persons	Specializations represented	Performance rating Impl. Status	Dev. Obj.
Identification/preparation	NA	NA	NA	-	-
Appraisal/negotiation	NA	NA	NA	-	-
Supervision	10/91	3	FA, FI, T	S	S
	01/93	2	E, FI	S	S
	07/93	4	C, ,F, FI, FI	U	S
	6/94	5	E, E, FI, N, R	U	S
	2/95	5	E, FI, FI, N, R	S	S
	3/96	2	E, FI	U	U
	9/96	3	A, FI, R	U	U
	12/96	2	A, R	U	U
	3/97	5	A, FI, I, N, R	S	S
	7/97	3	A, I, R	S	S
	12/97	3	A, I, R	S	S
	7/98	4	A, E, I, R	S	S
	3/99	6	A, E, FI, I, N, R	S	S
	9/99	6	A, E, E, I N, R	S	S
	3/00	5	A, E, I, N, R	S	S
Completion	6/2000	2	FI, FI	U	U

A=Agriculture, C= Civil engineer; E=Economist; FA=Financial analyst; FI=Fisheries specialist; I=ICEIDA co-lender; M=Management; N=NDF co-lender; R=Research specialist; T=Training specialist.

Annex B. Project Costs and Financing

Project Cost by Component (in US$ million equivalent)

Project Cost By Component	*Appraisal Estimate US$ million*	*Actual/Latest Estimate US$ million*	*Percentage of Appraisal*
Institution Building	6.20	12.07	195
Infrastructure	0.80	0.04	5
Research	1.61	2.27	141
Production	4.64	0.72	16
Contingencies	2.25		
Total Baseline Cost	15.50	15.10	
Physical Contingencies			97
Total Project Costs	15.50	15.10	
Total Financing	15.50	15.10	

Project Cost by Procurement Arrangements (in US$ million equivalent)

Expenditure By Categories	*Appraisal Estimates US$ million*				*Actual/Latest Estimate US$ million*				*Percentage of Appraisal*			
	ICB	NCB	Prudent Shopping	Total	ICB	NCB	Prudent Shopping	Total	ICB	NCB	Prudent Shopping	Total
Civil Works						7.59		7.59				
Goods & Equipment					0.53	0.45	3.29	4.27				
Training & Consultant							1.81	1.81				
Operating Costs							1.43	1.43				
Total					0.53	8.04	6.53	15.1				

* The column concerning appraisal estimates is left blank because there were no project cost estimates by procurement arrangements at appraisal.

Project Financing by Component (in US$ million equivalent)

Component	*Appraisal Estimate US$ million*					*Actual/Latest Estimate US$ million*					*Percentage of Appraisal*				
	IDA	GOM	NDF	ICEIDA	Ben[1]	IDA	GOM	NDF	ICEIDA	Ben	IDA	GOM	NDF	ICEIDA	Ben
Institution Building						7.86	2.3	1.92							
Infrastructure								0.04							
Research					1.0	0.02		0.13	2.13					213	
Production			3.5					0.72							
Total	8.7	1.1	3.5	1.0	1.0	7.88	2.3	2.81	2.13	na	91	209	80	213	na

1. Beneficiaries included MALDECO US$0.6 million and target group US$0.5 million. At project completion, details of MADECO's contribution were not available, and the component concerning the targets groups was not implemented.

Annex C. Supplemental Tables

Table 1. Fish Production in Malawi, 1976-98

Artisanal Fisheries (all waters)

	National Total Catch	Lake Malawi Total Catch	Lake Malawi Mechanized	Lake Malawi	All Other Waters	Lake Malomb	Lake Chilwa	Lake Chiuta	Upper Shire	Lower Shire
1976	54,646	23,575	6,654	16,921	31,071	4,776	15,115	700	823	9,657
1977	65,842	31,314	6,604	24,710	34,528	4,937	21,200	1,800	1,153	5,438
1978	62,985	27,607	6,458	21,149	35,378	6,841	20,800	1,500	637	5,600
1979	53,731	21,148	7,117	14,031	32,583	2,917	24,310	1,589	418	3,349
1980	50,948	22,869	6,601	16,268	28,079	4,969	16,839	777	1,716	3,778
1981	53,030	28,835	6,792	22,043	24,195	7,559	9,797	937	1,624	4,278
1982	59,477	23,969	7,012	16,957	35,508	12,936	15,567	1,229	551	5,225
1983	62,605	31,197	7,297	23,900	31,408	9,677	14,447	1,053	444	5,787
1984	59,808	28,795	7,532	21,263	31,023	10,375	13,026	1,838	862	4,922
1985	58,415	28,181	7,948	20,233	30,234	8,313	13,040	1,307	223	7,351
1986	69,574	32,759	7,302	25,457	36,816	12,618	13,720	698	739	9,041
1987	70,093	38,743	7,656	31,087	31,350	12,330	7,990	3,223	651	7,156
1988	60,881	33,219	7,081	26,138	27,662	10,535	6,708	1,659	582	8,178
1989	66,619	38,466	5,235	33,231	26,153	6,607	7,023	1,109	358	11,056
1990	76,532	31,008	6,205	24,803	45,524	12,084	23,558	2,381	504	6,997
1991	57,631	29,511	5,960	23,551	28,120	9,625	7,389	1,773	283	9,050
1992	59,171	35,027	5,548	29,479	24,144	7,600	10,459	2,687	440	2,958
1993	50,876	27,391	3,549	23,842	23,485	5,811	10,810	3,532	439	2,893
1994	53,920	34,239	4,778	29,461	19,681	4,134	10,186	3,350	265	1,746
1995	32,271	26,385	4,915	21,470	7,214	2,653	1,328	1,159	174	1,900
1996	49,393	39,612	2,896	36,716	9,781	3,573	0	4,035	326	1,847
1997						2,790	4,510	2,733		
1998						4,789	4,973	3,250		

Source: Fisheries Department Resource Report, 1999.

Table 2. Fisheries Department Proposed and Actual Staff Complement 1996-2000

Location/Function	Professional	Senior Technical	Junior Technical	Accounts, Admin. & Support	Total
(a) Structure proposed by the (then) DPMT,1993-96					
Fisheries Headquarters	9	0	0	26	35
National Field Programme	16	31	130	79	256
Capture fisheries research	15	5	16	23	59
Aquaculture programme	16	11	34	45	106
Fisheries Training	6	6	1	17	30
Mpwepwe boatyard	0	0	0	0	0
Department Total	**62**	**53**	**181**	**190**	**486**
(b) Staff in post in March 1996					
Fisheries Headquarters	8	1	4	22	35
National Field Programme	3	7	165	30	205
Capture fisheries research	3	4	18	7	32
Aquaculture programme	5	5	34	16	60
Fisheries Training	2	5	4	9	20
Mpwepwe boatyard	0	1	0	6	7
Department Total	**21**	**23**	**225**	**90**	**359**
(c) Staff in post at June 200					
Fisheries Headquarters	10	0	1	29	40
National Field Programme	11	12	103	35	161
Capture fisheries research	5	4	20	14	43
Aquaculture programme	5	11	22	20	58
Fisheries Training	3	8	0	9	20
Mpwepwe boatyard	0	0	0	0	0
Department Total	**34**	**35**	**146**	**107**	**322**

Table 3: FDP Civil Works Programme, 1996-2000

Station	Nature of Works	Implementation dates
Karonga	Construction of District Fisheries Office	1998-1999
Chilumba	Construction of sub-District Fisheries Office	1998-2000
Nkhata Bay	Rehabilitation of Regional and District Fisheries Office	1998-2000
	Construction of 2 staff houses	1998-2000
Salima	Construction of District Fisheries Office	1999-2000
	Construction of 1 staff house	1999-2000
Lilongwe	Construction of Fisheries Departmental Headquarters	1999-2000
Monkey Bay	Fisheries Research Unit rehabilitation and expansion	1996-1999
	Renovation of marine workshop	1999-2000
	Construction of 7 staff houses	1999-2000
Mpwepwe	Mpwepwe College of Fisheries: classrooms; workshops; library; office; dormitories; dining room; kitchen; guest house and staff housing	1996-1998
Mangochi	District Fisheries Office rehabilitation and expansion	1996-1998
	Construction of 1 staff houses	1999-2000
Zomba	Construction of staff houses	1998-2000
Bangula	Construction of District Fisheries Office	1998-2000
	Construction of staff houses	1998-2000

Table 4: Status and Number of FD/MRFC Mudzi Credit Groups, April 2000

	Karonga	Nkhata Bay	Nkhotakota	Salima	Mangochi	Zomba	Bangula	Total
Men's	7	10	0	1	29	0	25	72
Women's	40	11	13	5	43	0	10	122
Mixed	2	0	0	33	0	30	0	65
Total	**49**	**21**	**13**	**39**	**72**	**30**	**35**	**259**
Trained	45	19	5	27	46	25	29	196
Tested	25	19	2	27	46	25	29	173
Screened	25	10	2	27	46	25	26	161
Loans	15	5	2	27	46	25	3	123

Annex D. Executive Summary of the Lake Malawi/NYASA Biodiversity Conservation Project GEF Grant (TF28671-MAI)

Malawi's Lake Malawi/Nyasa Biodiversity Conservation Project, supported by a GEF Grant (TF 28671-MAI) of US$5.0 million was approved in 1995. Subsequently, under separate agreement CIDA made a grant (TF 22676-MAI) of CD$4.0 million. In addition, DFID provided assistance in kind by allowing use of their Malawian research facility and direct support to repair, operate, and maintain their fisheries research vessel. The bulk of the funding (63 percent) was used to pay expatriate consultants' fees and service contracts. At project closure in June 2000 after a one-year extension, total costs amounted to US$7.6 million of which GEF financed US$4.96 million and CIDA US$2.64 million. DFID's contribution in kind was equivalent to £0.36 million.

The objective of the project was to assist Malawi, Tanzania, and Mozambique in creating the scientific, educational, and policy basis required to ensure conservation of the biological diversity and unique ecosystem of Lake Malawi/Nyasa and producing a Biodiversity Map and Management Plan for the lake. There were seven components covering four main areas: building riparians' fisheries research capacity; basic surveys of the lake, its fish stocks, and water quality; reviewing riparians' environmental legislation to identify needed improvements and making recommendations for harmonization; and producing strategic management plans for the lake and special areas in Malawi.

Malawi, as the Sector Coordinator for Inland Fisheries within the Southern Africa Development Community (SADC), took the lead in preparing and executing the project. Implementation arrangements were complex and spread over eight institutions. Weak horizontal linkages to the riparians' national environmental institutions jeopardized the potential synergy from collaborative research as did weak ownership by Tanzania and Mozambique. A lack of clarity in describing the management functions of the international Steering Committee and a failure to establish an effective Research Advisory Committee created friction that undermined achievement of some project components.

The resources and time required to bring the Malawian research facilities and the DFID research vessel to operational status were underestimated. Salary supplements were provided to local staff without reference to their implication for overall civil service equity. Project design did not appreciate that each riparian had different priorities, levels of interest, and capacity to contribute to the project. And directing GEF funding through Malawi led to disagreement over the distribution of resources and benefits among the riparians.

Notwithstanding the above problems, the capacity building and research program was substantially completed to high international standards. The research and survey work has provided the basis for a number of landmark publications relating to the ecology, biodiversity, limnology, and water quality studies of Lake Malawi/Nyasa—and more are under production. The way in which the training was conducted has given the riparians' researchers an entrée into the international environmental and biodiversity research fraternity which should be highly beneficial in the long term. Three Lake Malawi/Nyasa reference fish collections were established, one each in Malawi, Belgium, and South Africa. During the extended phase of the project funded by CIDA, key environmental monitoring indicators were established. Conservation of the Lake's biodiversity is now seen in the context of national environmental management.

However, major weaknesses remain. There should have been more attention to training in natural resources management, and fisheries research staff are isolated from the mainstream environmental management institutions. Budgets are inadequate to maintain an active Lake research program and the DFID research vessel, while cessation of staff benefits provided from GEF funds reduce performance incentives. Piloting use of a touring drama group to promote environmental awareness in riparian countries is not sustainable without external funding, and awareness training may have targeted the wrong people, thus limiting its effectiveness. A high-quality strategic management plan for a selected area of Malawi was completed — but lack of implementation has caused enthusiastic stakeholders to lose interest. The Environmental Legislation component that was transferred to the FAO has yielded little to date, and is still ongoing. The scientific research and training agenda, which eventually cost more than twice the appraisal estimate, displaced forward-looking lake management planning: the Management Plan for Lake Malawi/Nyasa was not produced and the Biodiversity Map is only partially complete.

Project outcome is rated as moderately unsatisfactory. While the project was highly relevant, and built significant, if specialized local capacity and knowledge, it neither met its major objective to produce a Lake Malawi/Nyasa resource management plan nor did it mainstream concerns or findings about the Lake's biodiversity in the riparian country's environmental management plans. Notwithstanding achievements in capacity-building, institutional development is rated at modest. This is not unexpected given the relatively low political priority of biodiversity conservation, the wealth of other social and economic challenges in the region, and the time-scale needed to forge trilateral consensus and a regulatory framework for the Lake's management. Indeed, rather than establish a common vision, the project polarized the interests of the riparians and, apart from Malawi, ownership is low. Sustainability is rated as unlikely because adequate funds for continued biodiversity management are scarce and threats to biodiversity from inshore over-fishing were not ameliorated by the parallel Bank-financed Fisheries Development Project. Bank performance is rated as unsatisfactory because the initial problems created by inadequate appraisal and frequent change of Task Manager — due to Bank reorganization — allowed the research agenda to dominate the project at the expense of institutional development and mainstreaming. Borrower performance was also unsatisfactory because it failed to establish effective oversight of the research agenda, had difficulty in steering the activities of the expatriate research team and paid almost no attention to issues of riparian partnership.

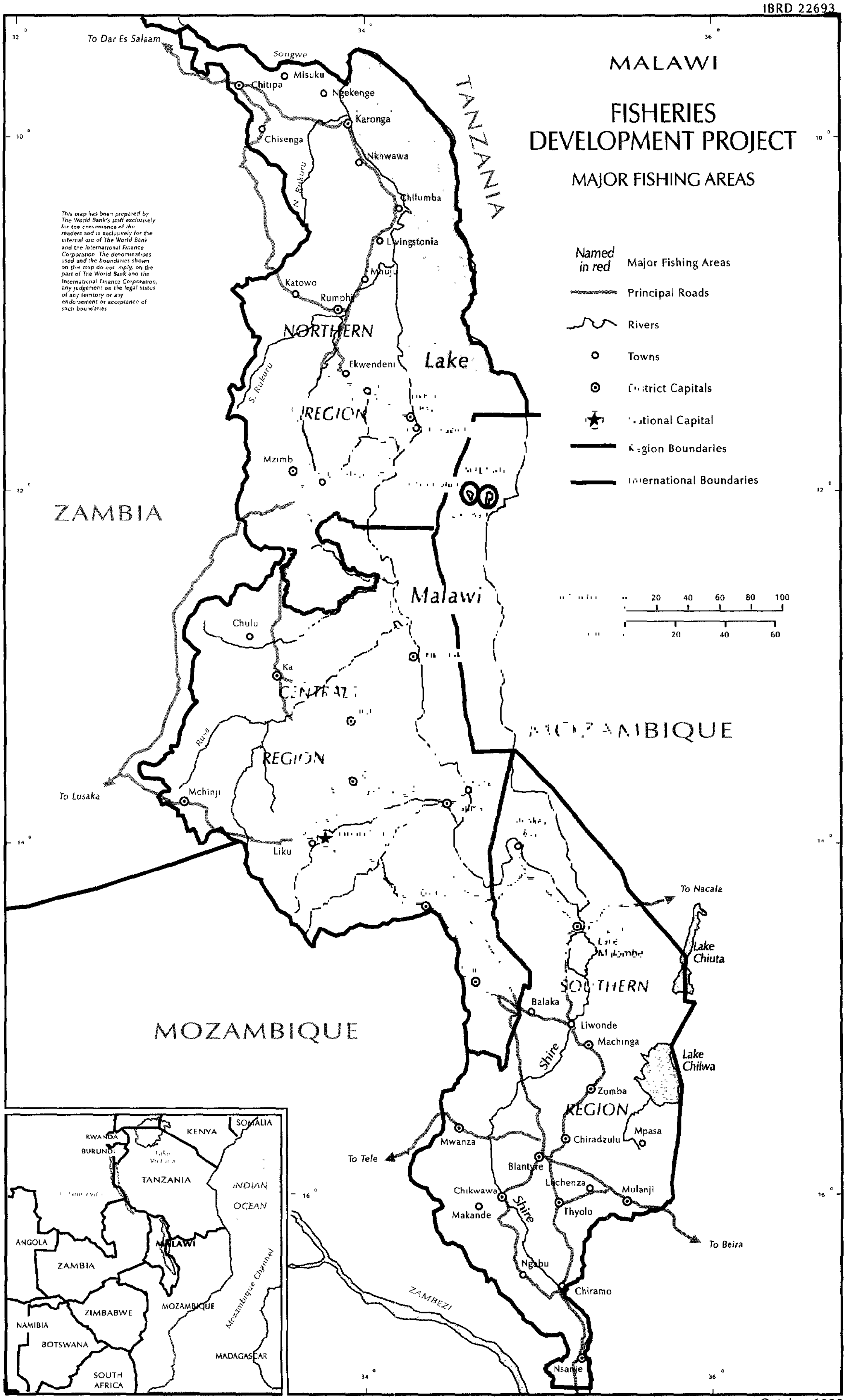
There are five major findings:

- Establishing regional institutions for international waters projects requires very careful planning, extensive consultation, clear and unambiguous agreements, protocols on communication, and an effective umbrella organization to coordinate and synergize riparians' efforts. All this requires a high level of Bank effort and facilitation to avoid GEF projects becoming enclave activities of questionable operational value.
- Achievement of multi-country objectives is put at risk if only one partner receives and manages GEF project financing. It is probably better to support cross-boundary resource conservation through free-standing projects to individual countries and deal with the inter-regional coordination in parallel.
- GEF biodiversity and environmental projects require objective management and technical review to ensure continued focus on their development and operational goals—and thus avoid becoming hostage to increasingly demanding scientific agendas.
- GEF projects need to be strongly linked to all relevant national environmental and natural resource agencies to mainstream the development effort and leverage outputs.

Partnership with bilateral development agencies (who have a comparative advantage in many areas) need to be carefully structured and based on shared objectives for which country ownership is assured if they are to significantly enhance the effectiveness of GEF projects.

Annex E. Comments from Government

No comments were received



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